Photo E - King Tutt Point, looking NE toward eastside adit; portal about 5' high, 8' wide.

Photo F - King Tutt Point, looking NE into eastside adit; note hand stacking of coarse waste rock just left of portal.

SJ-111

Photo G - King Tutt Point, looking east at main dump at west side of point.

Date Visited 11/2/79

Mine name(s) Begay (Begay #1) County San Juan

Section (Unsurveyed) Probably 24 Twnsh. 29 N R. 21 W

Quadrangle sheet Redrock Valley 15'

Mining district East Carrizo

Elevation 5550'

Nearest city and/or dwelling Oak Spring, 3 mi. N NW; single family dwelling ¼ mi. S.

The Begay Mine consists of an adit driven northward on the south edge of King Tutt Mesa ¼ mi. east of the King Tutt Point Mine. The portal is about 5' high, 7' wide, and several hundred feet deep plus drifts. Adit is untimbered but in very stable condition; little if any roof debris has fallen. Numerous footprints suggest that the local population frequents the mine. A 12' wide trench, 180' long leads to the portal of the mine, see photo (a); depth of trench increases to nearly 30' as the mine entrance is approached.

Some minor amounts of black vanadium oxide staining was noted on adit faces, but other evidence of mineralization is scant. Access is provided by dirt road leading eastward from the Red Rock-Oak Spring road and ascending King Tutt Mesa just east of the state line mile post marker #20. The road then turns southeastward and traverses the Begay claim (also called the E. Tapahonso No. 24); see claim index map attached.

Approximately 50' out front of the trench (southward) the mine tailings dump begins which extends another 100' southward (see photo b). At its terminus the dump is approximately 60' high with the material at the angle of repose. Dump contains mineralized fragments, mostly black vanadium oxide staining with some yellowish to greenish yellow coloration on surfaces-probably carnotite/tyuyamunite. Also in photo (b) note the drainage line below the dump, the single family dwelling near the bottom of the arroyo, Horse Mesa at center and left in the middle distance, and Beautiful Mountain in the far distance.

Photo (c) shows what is probably a ventilation shaft for this mine. It is located on the mesa top several hundred feet north of the adit entrance, is not fenced, and measures about 7' in diam. It is filled with plant debris, but is somewhat dangerous.

The mine produced from the Salt Wash member of the Morrison formation. It was operated during 1953-54 and 1966-67 by Walter Duncan, Jr., and also by VCA. Total production was reported as 3,921 tons or ore averaging .21% U_3O_8 and 1.63% V_2O_5; the ore contained 16,491 lbs. of U_3O_8 and 127,499 lbs. of V_2O_5, for a U:V ratio of approximately 1:5. The Carrizo Mine which also produced from these workings, (see Carrizo Mine report) reported a slightly lower U:V ratio of about 1:4.

(turn)

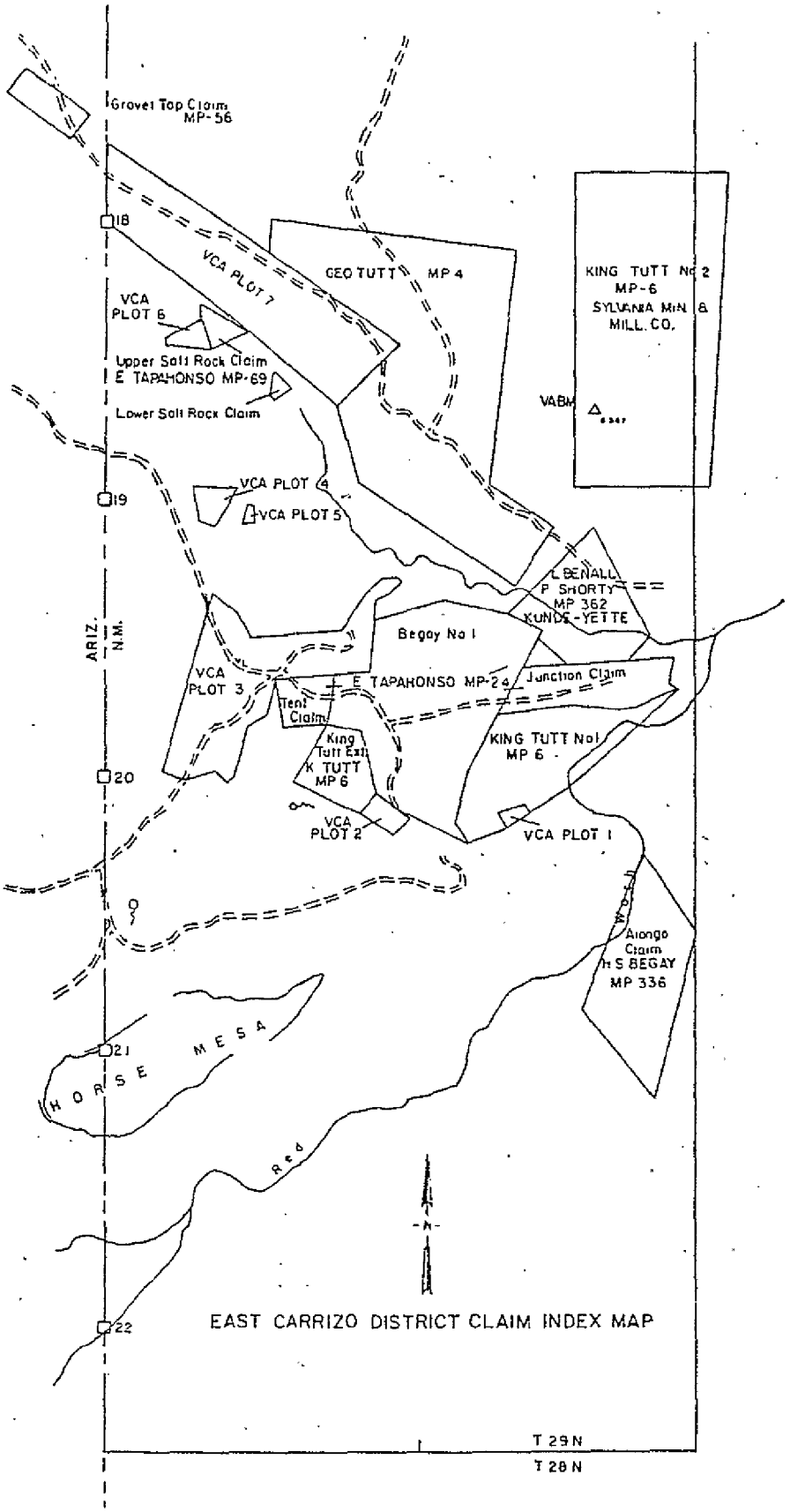
SJ-113

References: (1) Chenoweth, W.L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(2) Hilpert, L., 1969, Uran. Res. of NW New Mexico; U.S.G.S. pp. 603, p. 52.

(3) East Carrizo District Claim Index Map, 1953.

ES-114


Gravel Top Claim MP-56
18
VCA PLOT 7
GEO TUTT MP 4
KING TUTT No 2 MP-6 SYLVANIA MIN & MILL. CO.
VCA PLOT 6
Upper Salt Rock Claim
E TAPAHONSO MP-69
Lower Salt Rock Claim
VABM
19
VCA PLOT 4
VCA PLOT 5
L BENALL
P SHORTY
MP 362
KUNDE-YETTE
ARIZ.
N.M.
Begay No 1
VCA PLOT 3
E TAPAHONSO MP-24
Junction Claim
Tent Claim
King Tutt Ext
K TUTT MP 6
KING TUTT No1 MP 6
20
VCA PLOT 2
VCA PLOT 1
Alongo Claim
h S BEGAY
MP 336
21
HORSE MESA
Red
N
22
EAST CARRIZO DISTRICT CLAIM INDEX MAP
T 29 N
T 28 N

SJ-115

Photo (a) Begay #1, looking N into 12' wide trench with adit entrance at end.

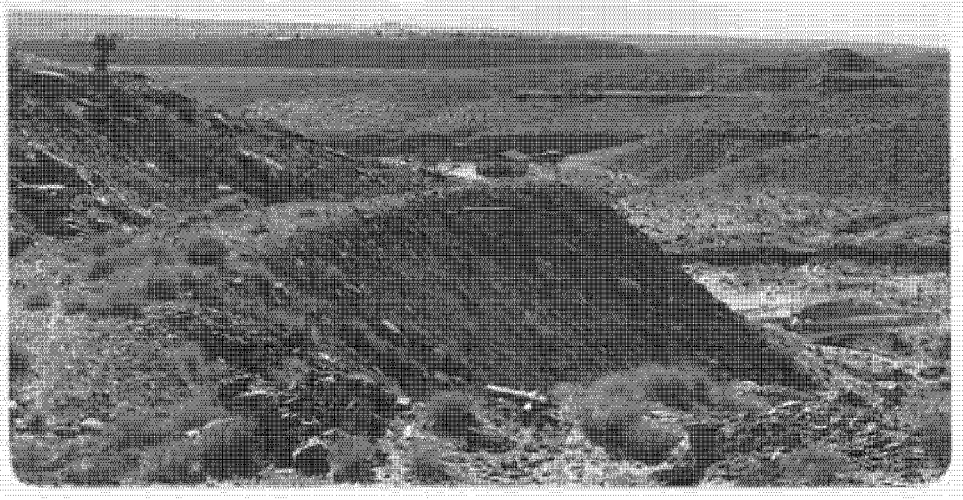


Photo (b) Looking SE at waste dump of Begay #1; note dwelling and drainage line in background; Beautiful Mtn. in far distance.

Photo (c) Ventilation shaft of Begay #1; pole at right is 5" diam, 7' long.

SJ-117

Date Visited 11/2/79

Mine name(s) Red Wash Point (VCA Plot #1) County San Juan

Section SW¼ 24 (Unsurveyed) Twnsh. 29 N R. 21 W

Quadrangle Sheet Redrock Valley 15'

Mining district East Carrizo

Elevation 5500'

Nearest City and/or dwelling Oak Springs 2½ mi. NW

The Red Wash Point on VCA Plot #1 is located on a small NE trending ridge, on the west side of Red Wash (see Claim map). Access is by dirt road just north of Horse Mesa.

Workings on the property consist of two small adits and numerous small bulldozer cuts and pits. The disturbed area is roughly triangular shaped, trending or pointing NE, and measure about 500' E-W by 30' N-S, fanning into 75+ feet maximum on the southwest. A large dump runs the entire lenght of the property on the southeast side, and a small dump spills over the north side opposite a small adit.

Photo (a) shows twin adit entrances on the far southwestern end of the property. The adits are approx. 5' high, 6 feet wide, and are located in a small pit, or quarry, 25' x 45', the maximum depth being about 12'. Note stacking of waste rock in Photo (a). Photo (b) shows a closeup of the adits in Photo (a), note hammer for scale. The adits connect ten feet in the trend SE for at least 30'. Photo (c) shows the smaller, partially collapsed adit in the north-central portion of the claims. The opening is 3' high, 4' wide, and extends in about 15'. Photo (d) is looking NE along the southern edge of the workings. A typical pit is shown in the foreground with dumps in the right center and bulldozer cuts on the left side of the photo. The low cliffs in the upper middle of the photo border Red Wash.

The Red Wash Point workings are in the Salt Wash member of the Morrison formation. No scintillometer readings were available, but yellow and yellowish/green uranium oxides were noted. Total production was 305 tons averaging .37% U_3O_8 and 2.95% V_2O_5, containing 2,244 and 18,230 lbs. respectively.* Production was in 1950 and 1952, being operated by the VCA and Harry Russell.

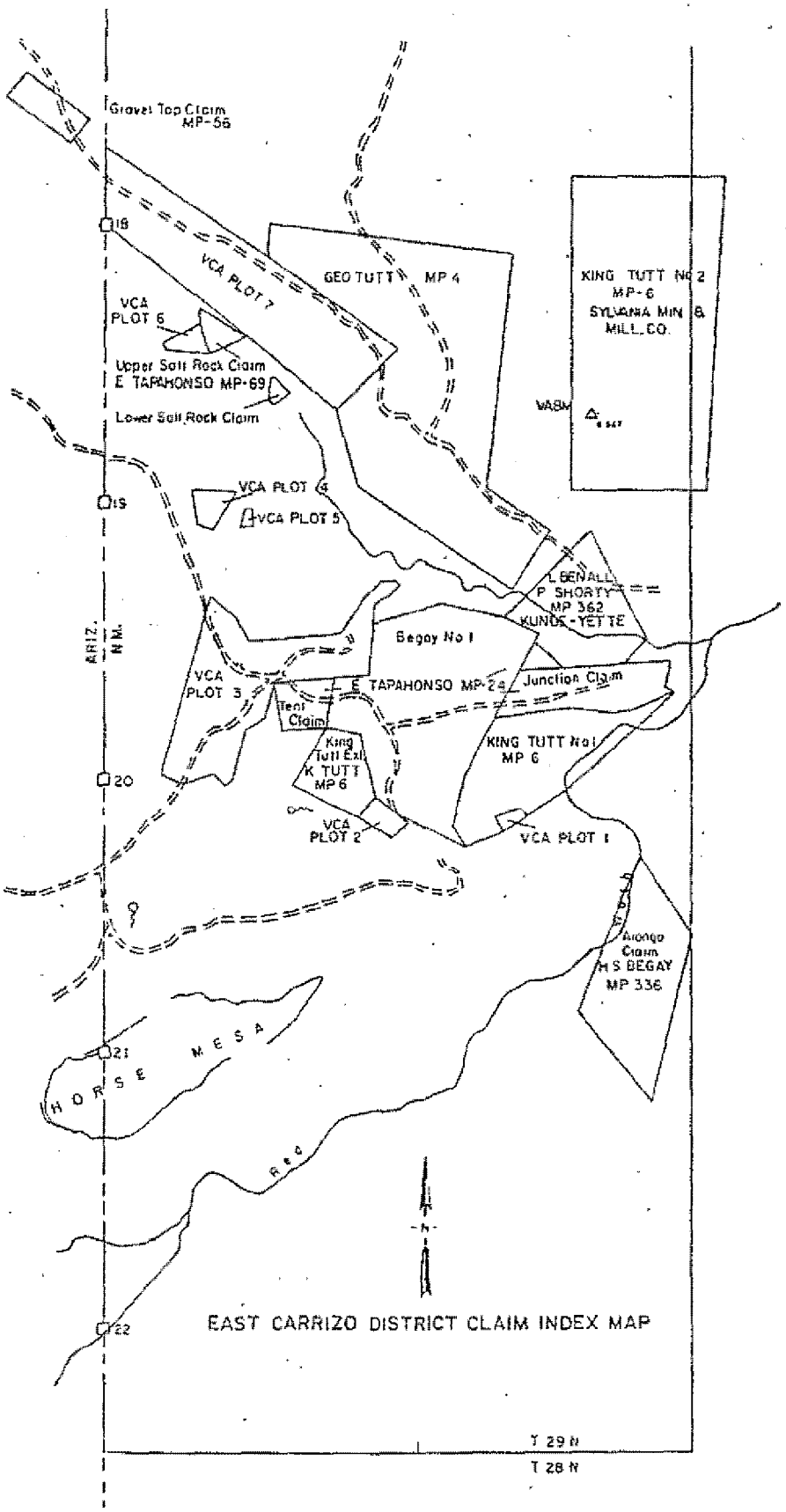
References: (1) Chenoweth, W.L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(2) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S. Prof. Paper 603, p.52.

(3) East Carrizo District Claim Index Map, 1953

* Some earlier production, 1942-44, 1948-50, was included with East Reservation Lease production.

SJ 118


Gravel Top Claim MP-56
18
VCA PLOT 7
VCA PLOT 6
Upper Salt Rock Claim
E TAPAHONSO MP-69
Lower Salt Rock Claim
GEO TUTT MP 4
KING TUTT NO 2 MP-6
SYLVANIA MIN & MILL CO.
VABM
VCA PLOT 4
15
VCA PLOT 5
L BENALLY
P SHORTY
MP 362
KUNDE-YETTE
ARIZ. N.M.
Begay No 1
VCA PLOT 3
E TAPAHONSO MP-2a
Junction Claim
Tent Claim
King Tutt Ext K TUTT MP 6
KING TUTT No 1 MP 6
20
VCA PLOT 2
VCA PLOT 1
Arroyo Claim H S BEGAY MP 336
HORSE MESA
21
RED
N
22
EAST CARRIZO DISTRICT CLAIM INDEX MAP
T 29 N
T 28 N

S3 - 119

Photo A - Looking SW at twin adit entrance in SW corner of workings. Note stacked waste rock; entrance about 5' high.

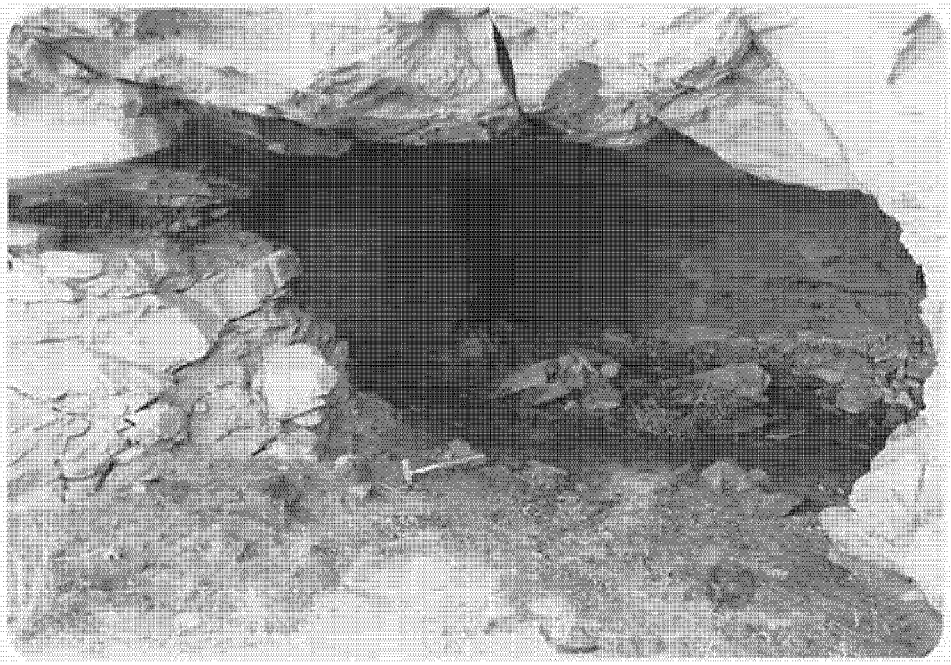


Photo B - Looking SW into adit shown in Photo A; note hammer for scale.

SJ-120

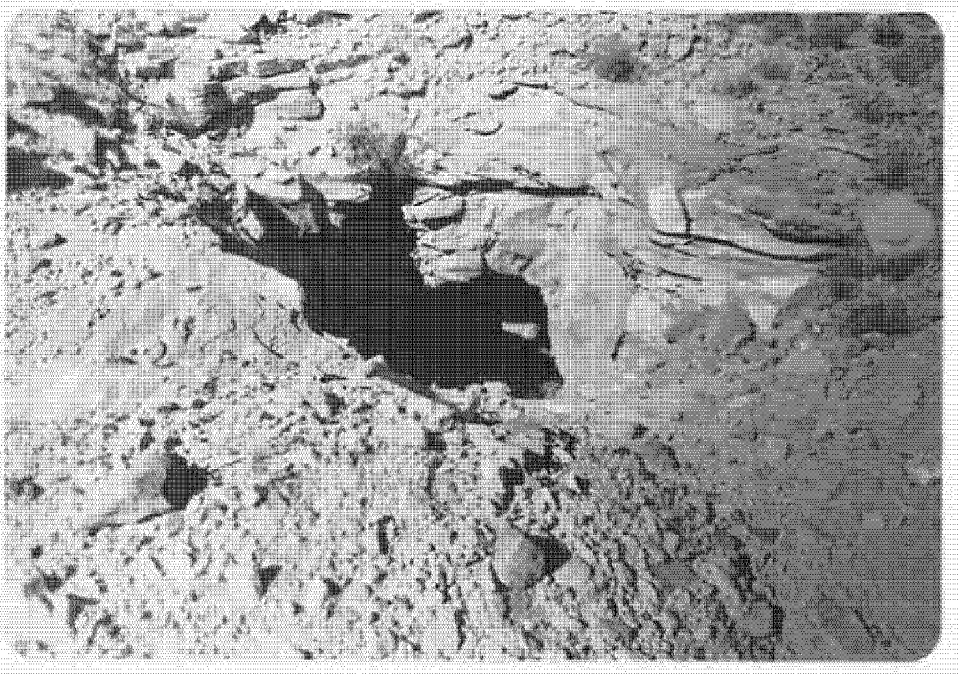


Photo C - Looking north at entrance to small adit. Hammer for scale.

Photo D - Looking NE along southern end of workings. Cliffs in background form the west bank of Red Wash.

SJ-121

Date Visited 11/2/79

Mine name(s) King Tutt 1 (MP6) County San Juan

Section Center 24 Twnsh. 29 N R. 21 W

Quadrangle Sheet Redrock Valley 15'

Mining district East Carrizo

Elevation 5,520'

Nearest City and/or dwelling 2¼ mi. SE of Oak Springs.

The King Tutt #1 is located on the west side of a small tributary which drains northeastward into Red Wash (photo a). Access is by dirt road eastward from the Oak Springs/Red Rock road towards Red Wash Point. The road runs ENE just north of Horse Mesa, and south of the 20 mile state line marker (see claim map).

Workings at the King Tutt #1 consist of a southern decline and a northern adit. The southern decline (Photos b & c) trends S65°W with a 10-15° grade for the first 100', at which point it levels out to horizontal. The portal is 10' wide, 7' high, and the lenght is at least 150'. The northern adit is approximately 200 feet north of the decline (photos d & e). The area leading into the adit has been mined as an open cut. The open cut dimensions are 25 feet wide (N-S), 35 feet long (E-W), and attains a maximum depth of 6 feet. The portal is 4 feet high and 15 feet wide (see plan map for dimensions). The first ten feet of the small adit are timbered.

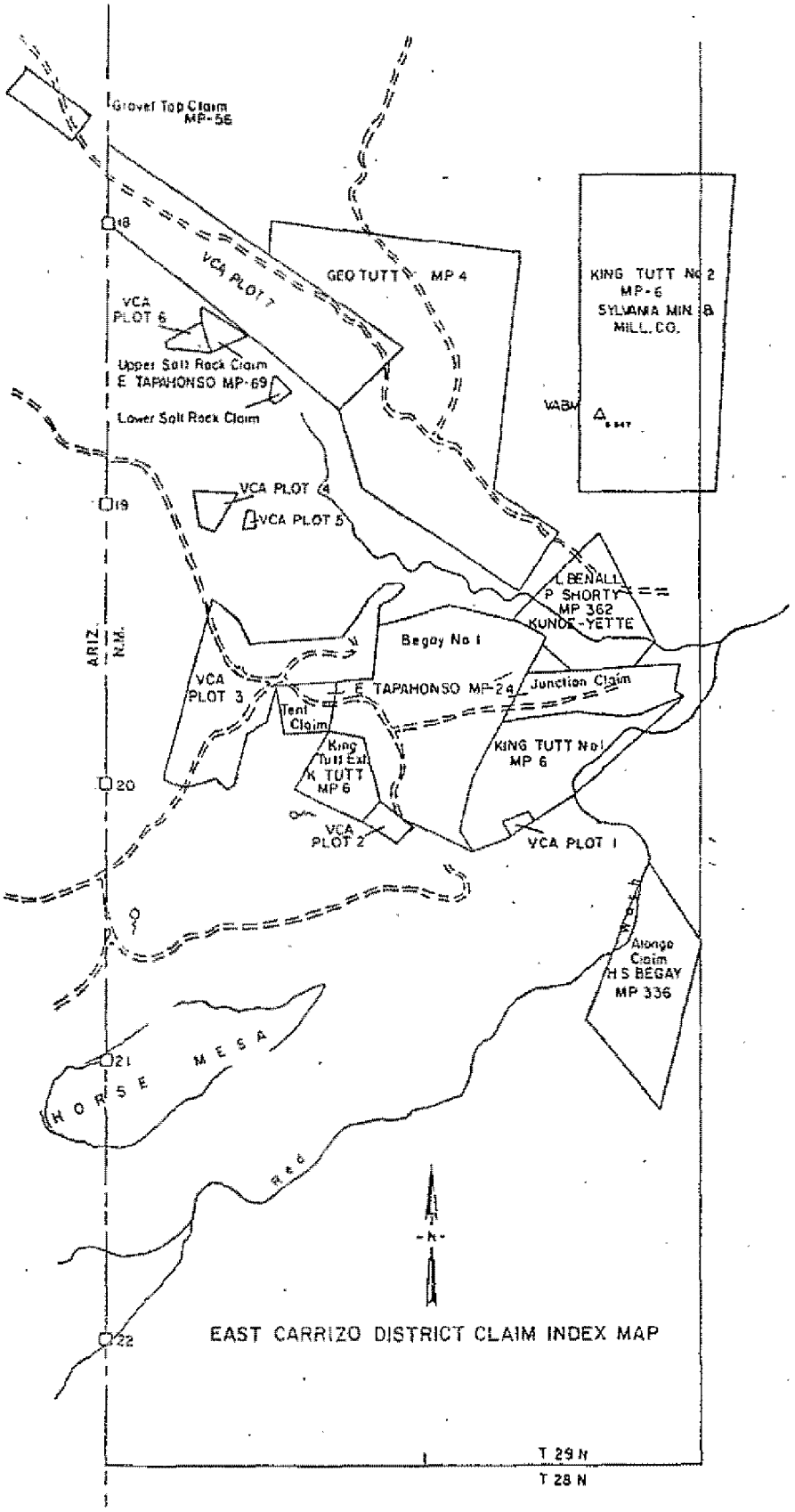
Both the adit and the decline are driven in the Salt Wash Member of the Morrison Formation. Mineralization is in the form of yellow uranium and black vanadium oxides. Scintillometer readings were 7,000 cps. 50 feet into the decline, and 8,000 cps. at the portal of the northern adit. The King Tutt #1 was worked by Shorty and Tutt; Sylvania Mining; and, Charles N. Pickens in 1951, 1953, 1956, and 1958. Total production was 290 tons of ore which contained 1,060 pounds of U_3O_8 at an average grade of .18%, and 8,257 pounds of V_2O_5 at an average grade of 1.42% (A.E.C.). The U:V ratio was 1:3 (Hilpert, 1969).

References: (1) Chenoweth, W.L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains. San Juan County, New Mexico, U.S. DOE, TM-210.

(2) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S. Prof. Paper 603, p. 52.

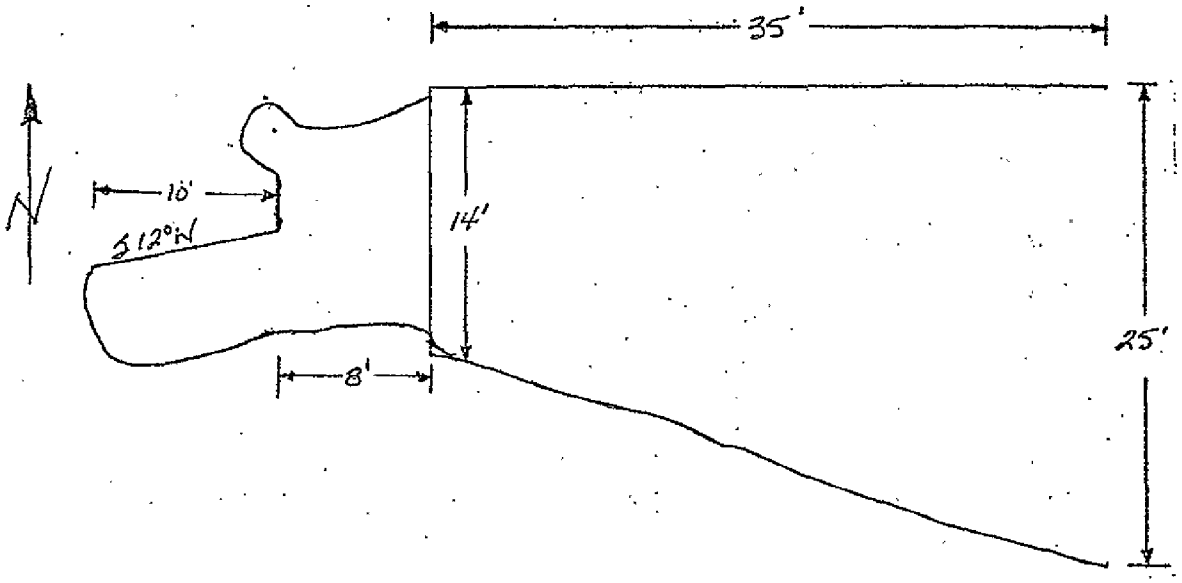
(3) East Carrizo District Claim Index Map, 1953.

SJ-105


Grover Top Claim
MP-58
18
VCA PLOT 7
GEO TUTT MP 4
KING TUTT No 2
MP-6
SYLVANA MIN &
MILL. CO.
VCA
PLOT 6
Upper Salt Rock Claim
E TAPAHONSO MP-69
Lower Salt Rock Claim
VABM
19
VCA PLOT 4
VCA PLOT 5
L BENALLY
P SHORTY
MP 362
KUNDE-YETTE
ARIZ.
N.M.
Begay No 1
VCA
PLOT 3
E TAPAHONSO MP-24
Junction Claim
Tent
Claim
King
Tutt Ext
K TUTT
MP 6
KING TUTT No 1
MP 6
20
VCA
PLOT 2
VCA PLOT 1
Alonzo
Claim
H S BEGAY
MP 336
21
HORSE MESA
R 4 E
N
22
EAST CARRIZO DISTRICT CLAIM INDEX MAP
T 29 N
T 28 N

Plan Map of the Northern King Tutt #1 Workings

Scale: 1"=10'



Adit Area

Open Pit Area

ST 124

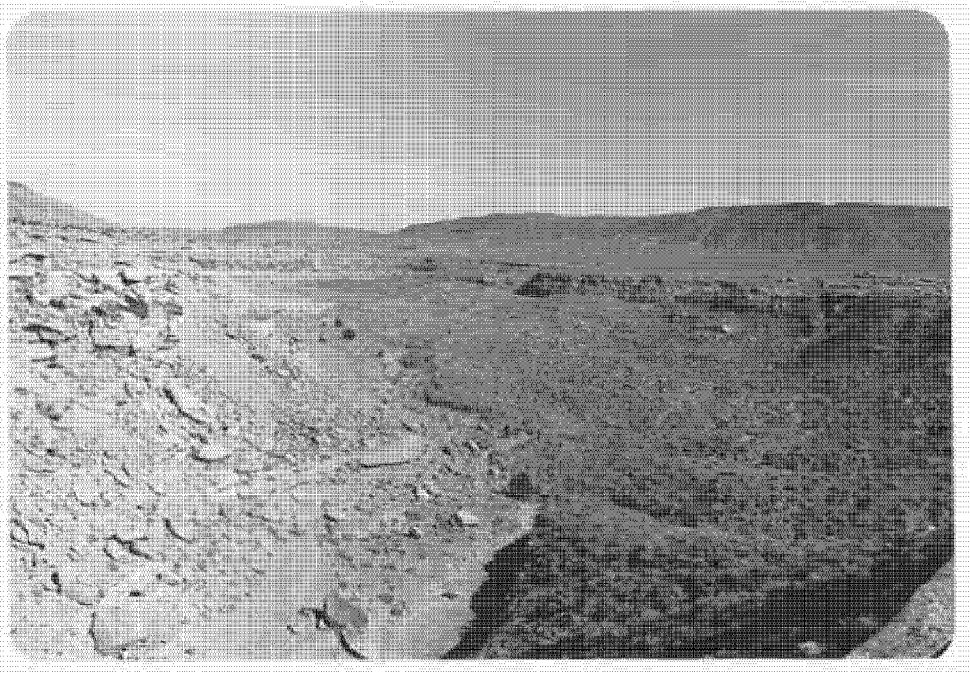


Photo A - location of King Tutt 1. Wash in left foreground is the small tributary leading into Red Wash. Big Greg Mesa is located on the right center of the photo. The arrow indicates the location in the northern adit. The dump in the far right is the Red Wash Point workings. Photo looking NE.

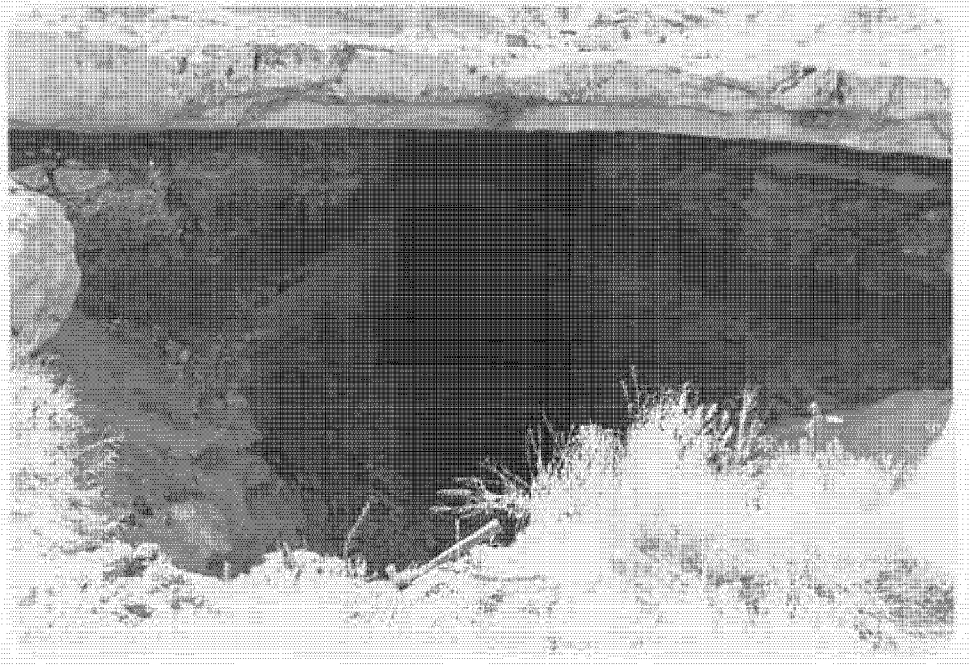


Photo B - Portal to southern decline. Hammer in foreground for scale. Photo looking SW.

53-125

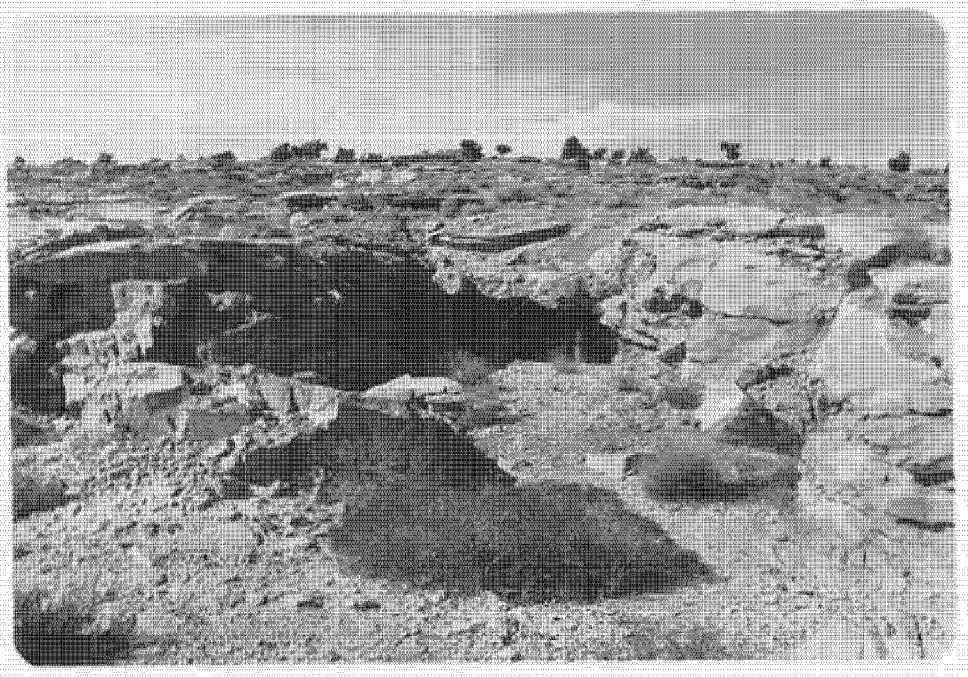


Photo C - Close up inside decline. Note leveling off of slope at the center of the photo. Material at the bottom of the decline is silt. Tumbleweed on the floor is approximately 1½ feet across.

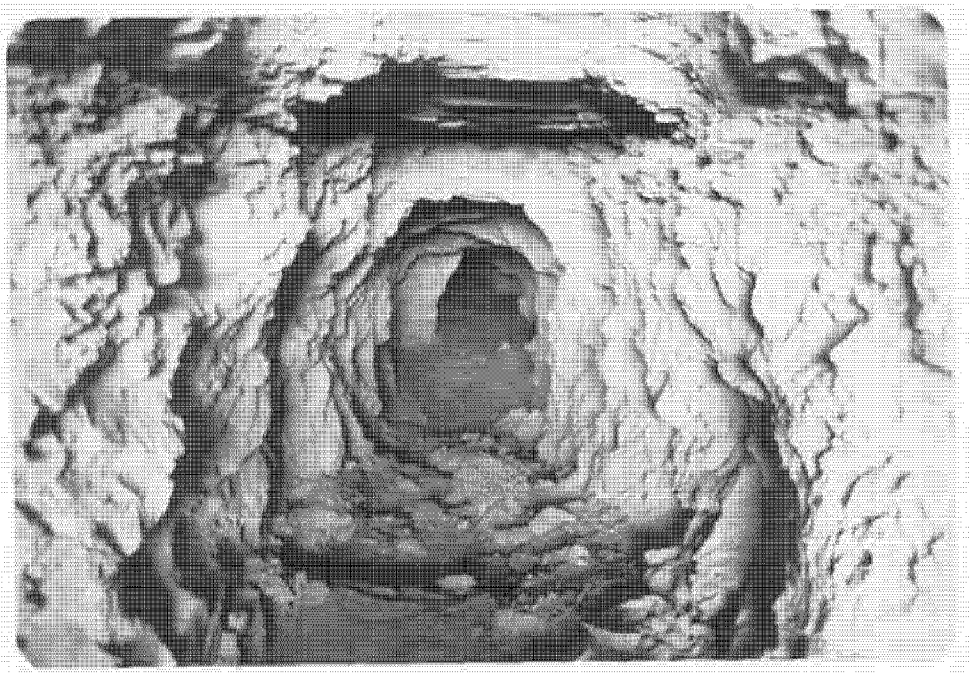


Photo D - Looking west at pit leading to northern adit portal. Timbered entrance to adit is 4 feet high.

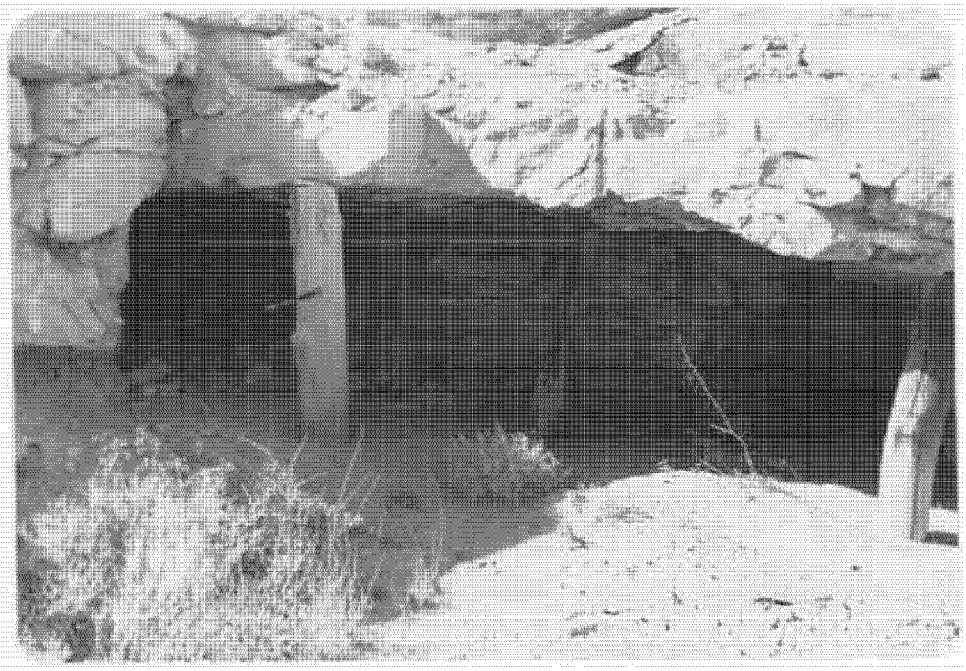


Photo E - Looking west. Close up of adit in Photo D showing timbering. Note hammer in left post for scale.

Date Visited 11/2/79

Mine name(s) Junction County San Juan

Section NE¼ 24 Twnsh. 29 N R. 21 W

Quadrangle Sheet Redrock Valley 15'

Mining district East Carrizo

Elevation 5440'

Nearest City and/or dwelling 2 mi. SE of Oak Springs

The Junction deposit is on the northwest side of Red Wash, just south of the confluence of Red Wash and Oak Spring Wash. Access to the property is via dirt road eastward from the Oak Spring/Red Rock road. The dirt road runs ENE towards Red Wash Point between Horse Mesa and the 20 mile state line mile marker (see claim index map).

Workings at the Junction are a bench cut (Photo A), and a small adit (Photo B) located 100' northwest of the bench cut. The bench cut is 4 feet by 15 feet wide, and 6 feet high. A small dump 15 feet by 15 feet spills over the edge of the cliff face directly south of the cut. Maximum scintillometer readings were 110 CPS along the face of the cut. The adit is 5 feet wide and 4 feet high at the protal, and is 25 feet long. It gradually thins to a width of 3 feet at the back face. Maximum scintillometer readings were 1,300 CPS about 10 feet inside the adit. A small dump 20' x 15' is located directly south of the adit.

Both workings are located in the Salt Wash Member of the Morrison Formation. No uranium minerals were visible. The mine was operated by Walter Duncan in 1953, and produced 18 tons of ore containing 38 pounds of U_3O_8 at an average grade of .11%, and 153 pounds of V_2O_5 at an average grade of .43% (AEC).

References: (1) Chenoweth, W.L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(2) Chenoweth, William, and Malan, R. C., 1973, The Uranium Deposits of Northwestern Arizona, in New Mexico Geol. Soc. 24th guidebook, Monument Valley, pp. 139-149.

(3) Hilpert, 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S. Prof. Paper 603, p.52.

(4) East Carrizo District Claim Index Map, 1953.

SJ-128

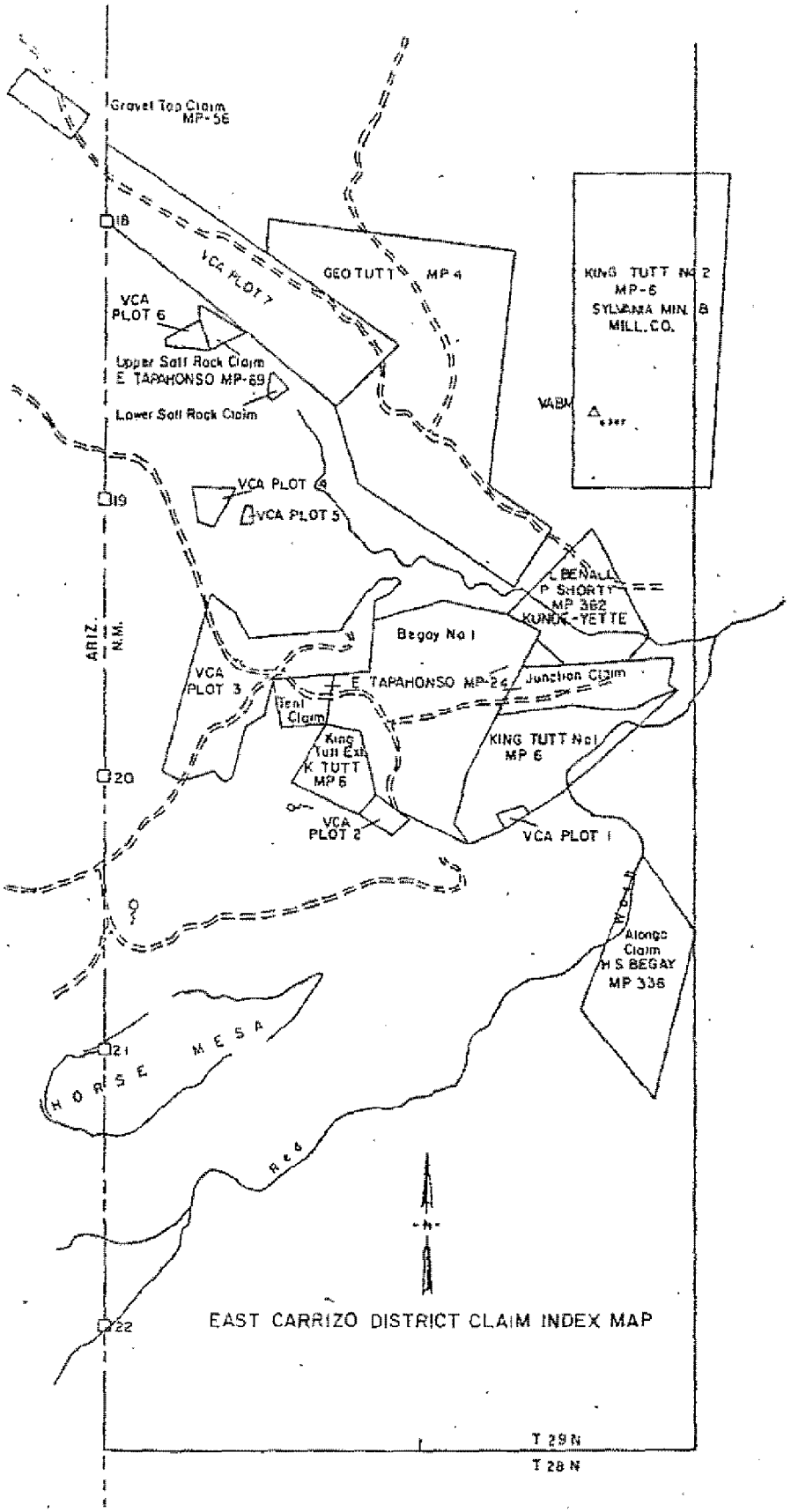

Gravel Top Claim MP-58
18
VCA PLOT 7
GEO TUTT MP 4
KING TUTT NO 2 MP-6
SYLVANIA MIN. & MILL. CO.
VCA PLOT 6
Upper Salt Rock Claim
E TAPAHONSO MP-69
Lower Salt Rock Claim
VABM
19
VCA PLOT 4
VCA PLOT 5
L BENALL
P SHORTT
MP 362
KUNDE-YETTE
ARIZ.
N.M.
Begay No 1
VCA PLOT 3
E TAPAHONSO MP-24
Junction Claim
Trail Claim
King Tutt Ext
K TUTT MP 6
KING TUTT No 1 MP 6
20
VCA PLOT 2
VCA PLOT 1
Alonga Claim
H S BEGAY MP 336
HORSE MESA
21
RED
N
22
EAST CARRIZO DISTRICT CLAIM INDEX MAP
T 29 N
T 28 N

Photo A - Looking north at locations of the bench cut and adit on the Junction Claims.

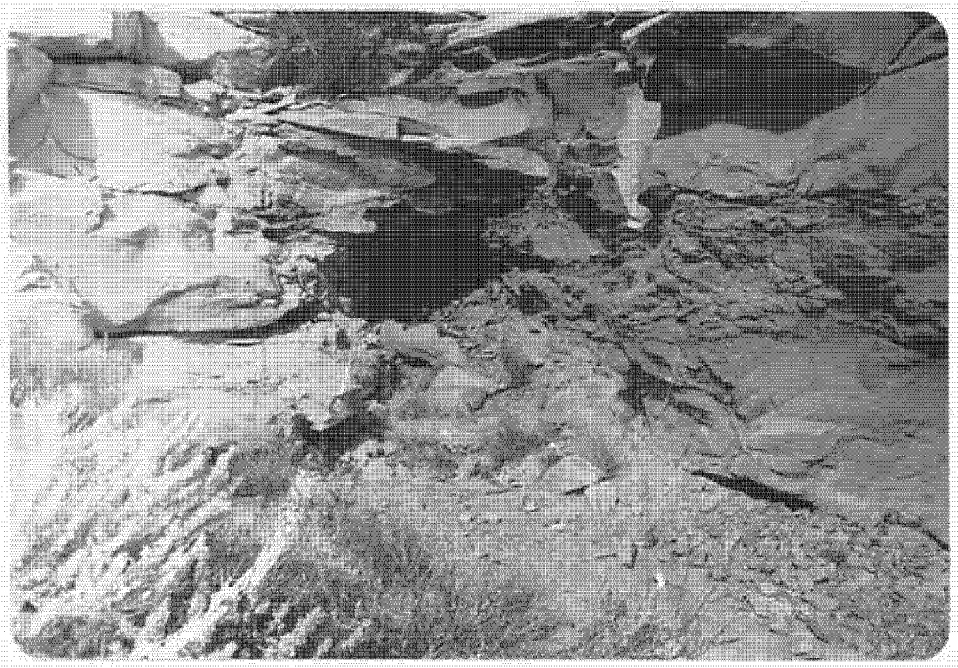


Photo B - Looking NW at adit entrance. Note hammer (circled) for scale.

Date Visited 11/2/79

Mine name(s) Alongo (Alongo Claim) County San Juan

Section NE¼ 25 (Unsurveyed) Twnsh. 29 N R. 21 W

Quadrangle Sheet Redrock Valley 15'

Mining district East Carrizo

Elevation 5580'

Nearest City and/or dwelling Farm house ¼ mile west of the mine. 3 mi SE of Oak Spring.

The Alongo is located approximately 20' below the mesa top on the east side of Red Wash. Roads lead into the area from Beclabito and Oak Spring on the north and from Red Rock on the south. However, the last 1/2-3/4 of a mile must be made on foot (see claim index map for roads into area). Workings at the Alongo consist of two adits about 220' apart along the west facing rim above Red Wash (see photo a). The north adit is 50 feet long and trends E SE; it contains over 60' of drifts. A thin band of uraniferons material is present, but is not of ore grade (Tipton and Grundy, 1960). The portal of the southern adit is S 18° W from the north adit, is 72' long, and driven nearly due east. Two drifts totaling 12 feet driven off this adit, but no ore was intersected (Tipton and Grundy, 1960). In the field check of 11/2/79, only one adit was encountered by the author, one which matches the description of the northernmost adit of Tipton and Grundy, 1960; adit shown in Photo (b).

The adits were driven in the Salt Wash member of the Morrison formation, approximately 40 feet above the contact with the Bluff Sandstone. No Uranium minerals were visible. Total production was 27 tons, which produced 76 pounds of U_3O_8, averaging .14% and 76 pounds of V_2O_5 averaging .14% (A.E.C.). The property was operated in 1956 by E. J. Alongo.

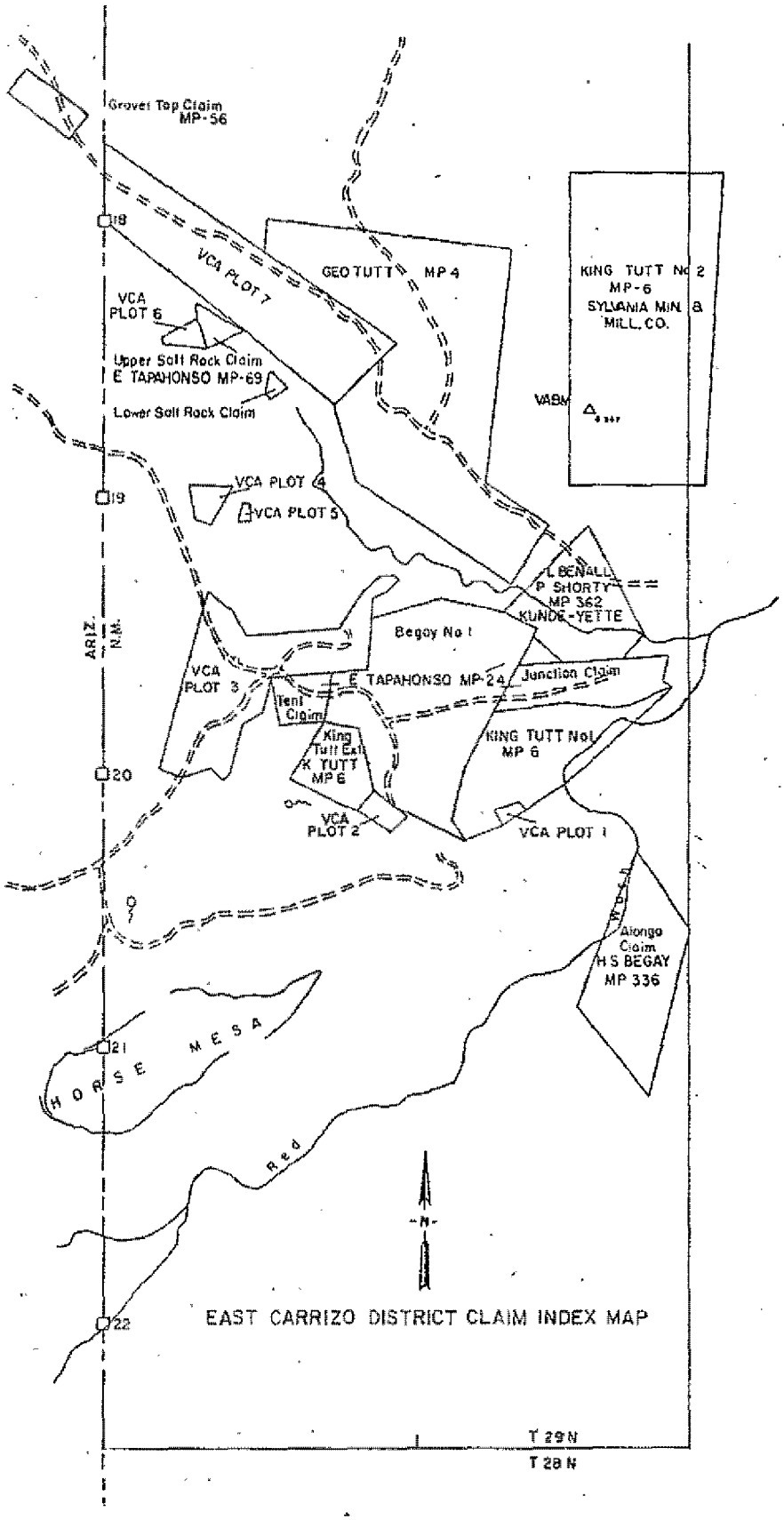
References: (1) Chenoweth, W.L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(2) Hilpert, L.S., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S. Prof. Paper 603, p. 52.

(3) Tipton, W. D., and Grundy, W. D., 1960, Field Examination of Alongo Tract (C-711), San Juan County, New Mexico, unpublished A.E.C. field report.

(4) East Carrizo District Claim Index Map, 1953.

SJ-131


Gravel Top Claim
MP-56
18
VCA PLOT 7
GEO TUTT MP 4
KING TUTT No 2
MP-6
SYLVANIA MIN &
MILL. CO.
VCA
PLOT 6
Upper Salt Rock Claim
E TAPAHONSO MP-69
Lower Salt Rock Claim
VABM
19
VCA PLOT 4
VCA PLOT 5
L BENALLY
P SHORTY
MP 362
KUNDE-YETTE
ARIZ.
N.M.
Begay No 1
VCA
PLOT 3
E TAPAHONSO MP-24
Junction Claim
Tent
Claim
King
Tutt Ext
K TUTT
MP 6
KING TUTT No1
MP 6
20
VCA
PLOT 2
VCA PLOT 1
Alongo
Claim
H S BEGAY
MP 336
21
HORSE MESA
Red
N
22
EAST CARRIZO DISTRICT CLAIM INDEX MAP
T 29 N
T 28 N

53-150

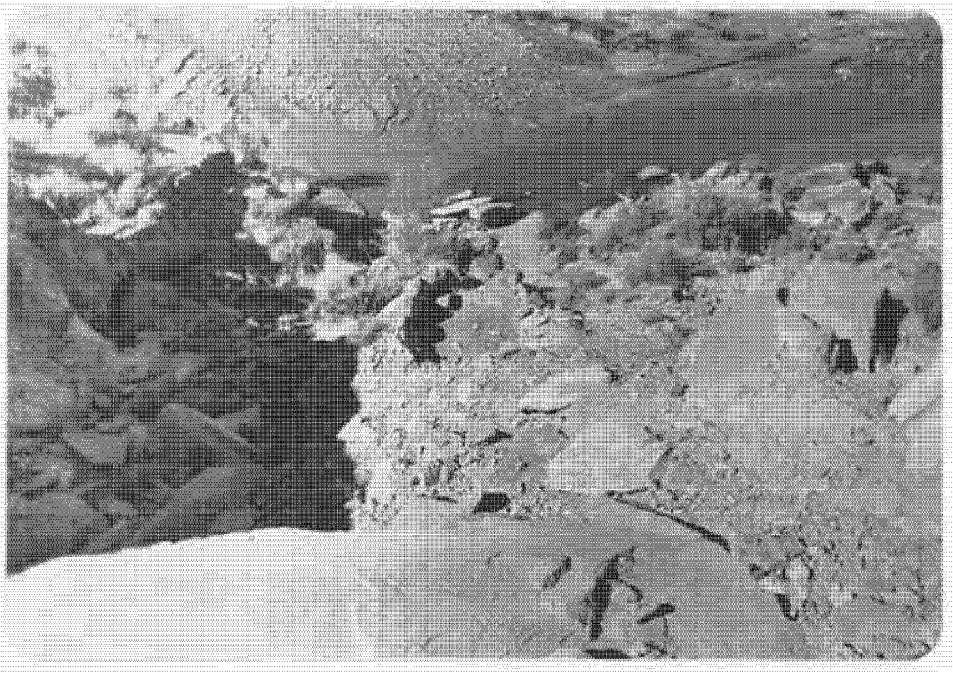


Photo A - Looking downslope and to the west of the Alongo workings. Note Red Wash at the top of the photo.

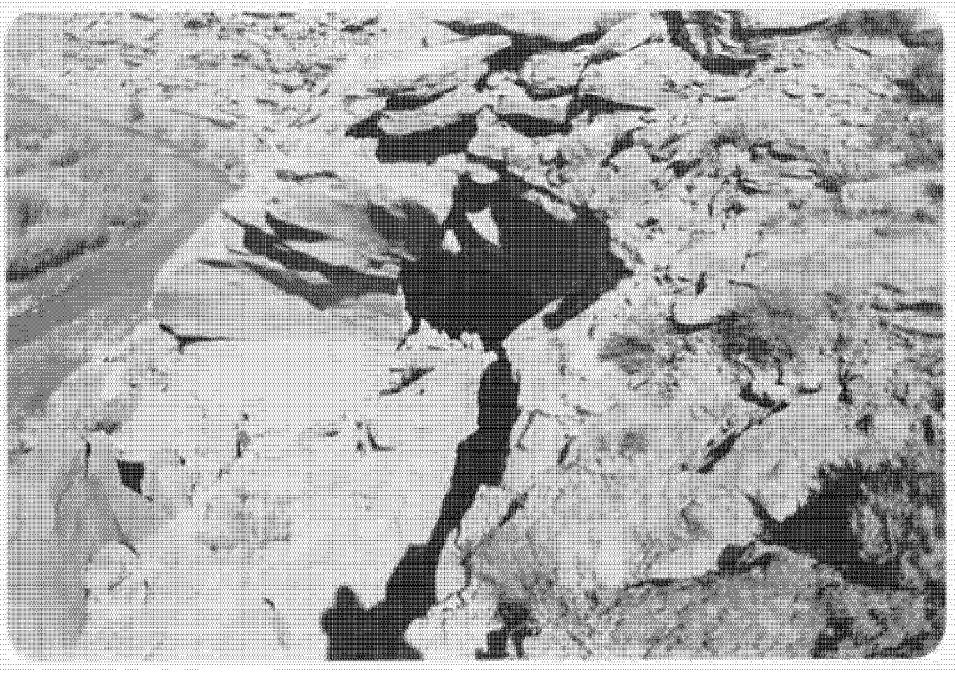


Photo B - Looking west at Alongo adit. Red Wash below at left photo.

Date visited 11/2/79

Mine name(s) Canyon View (Alongo Claim) County San Juan

Section (Unsurveyed) Probably NE¼ 25 Twnsh. 29 N R. 21 W

Quadrangle sheet Redrock Valley 15'

Mining district East Carrizozo

Elevation 5,580'

Nearest city and/or dwellings Farm house ½ mi. to the W. Beclabito is 11 miles to the northeast:

The Canyon View is located approximately 20' below the mesa top on the east side of Red Wash, several hundred feet south of the Alongo Mine. Access to the Canyon View is by dirt road eastward from the Oak Spring/Red Rock road toward Red Wash Point, with the last 1/2-3/4 mile on foot. Workings at the Canyon View consist of a single adit (Photo a) with a portal 4' high and 5' wide. Approximately 10' into the adit a small drift branches to the left and the main workings to the right. See attached mine sketch, and claim index map.

Although no scintillometer readings were available, the ore was apparently associated with the black vanadium stains or streaks in the sandstone. No uranium minerals were visible. Host rock is the Salt Wash member of the Morrison formation.

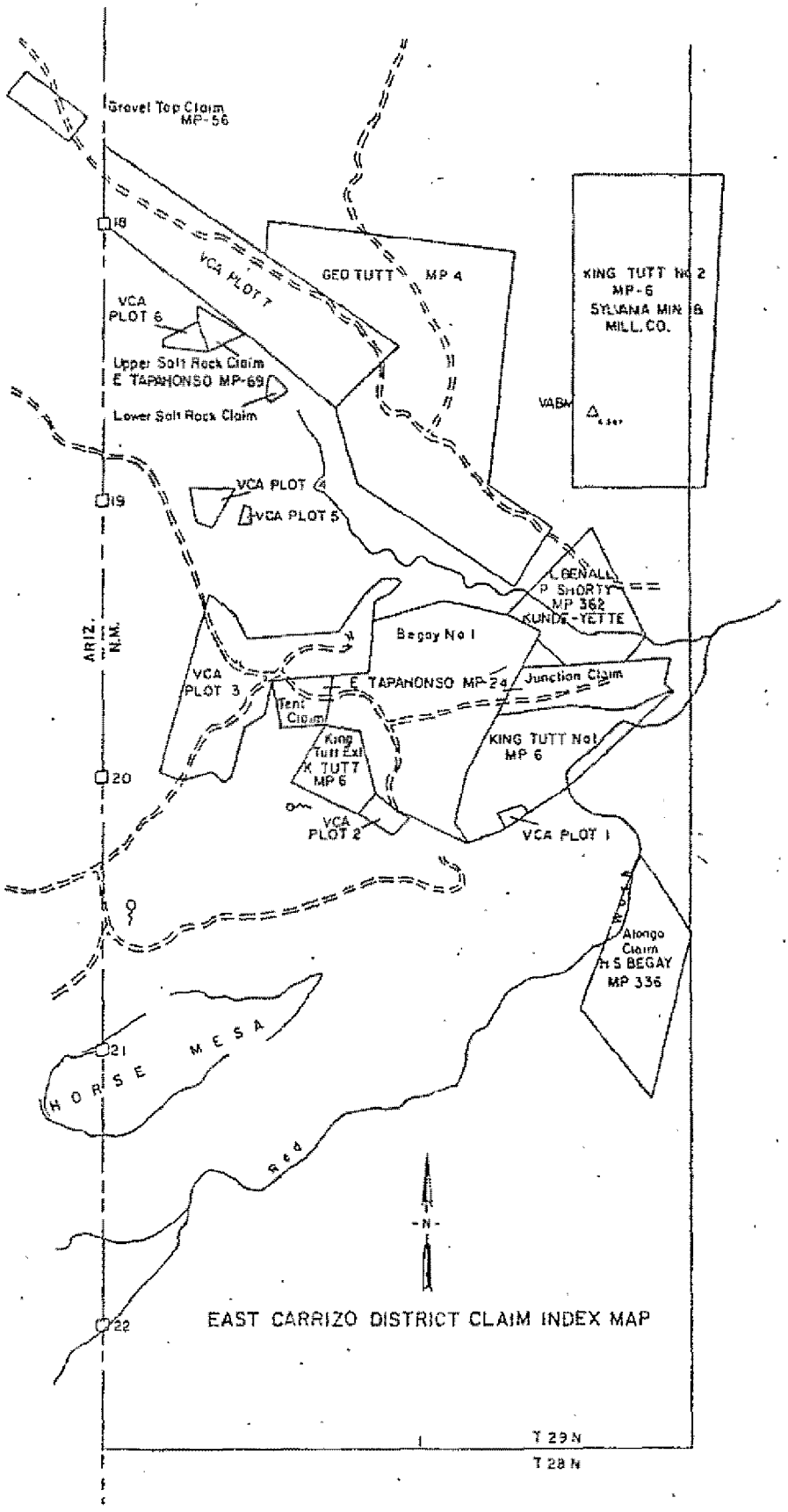
The Canyon View Mine was operated by H.S. Begay from 1950-1952, producing 497 tons of ore averaging .37% U_3O_8, and V_2O_5; containing 3,699 lbs. U_3O_8 and 32,870 lbs. of V_2O_5.

References: (1) Chenoweth, W. L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(2) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S., Prof. Paper 603, p. 52.

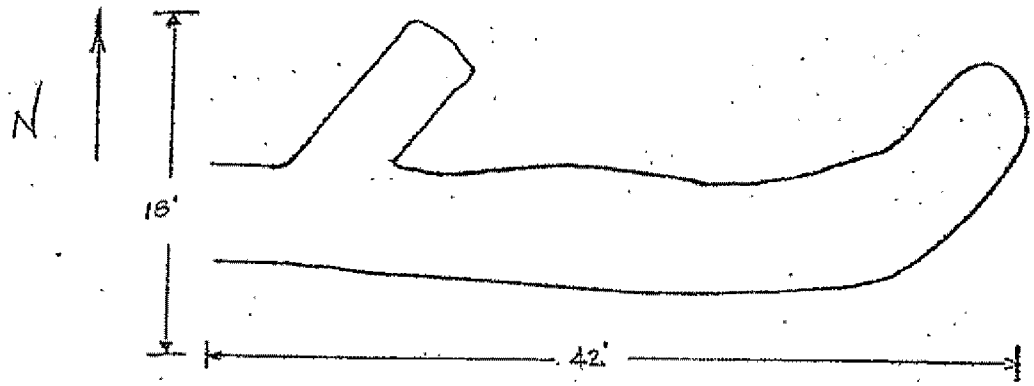
(3) East Carrizo District Claim Index Map, 1953.

SJ-134



Scale: 1" = 10'

Mine Plan - Canyon View



ST-126

Photo A - Looking east into Canyon View, note hammer for scale.

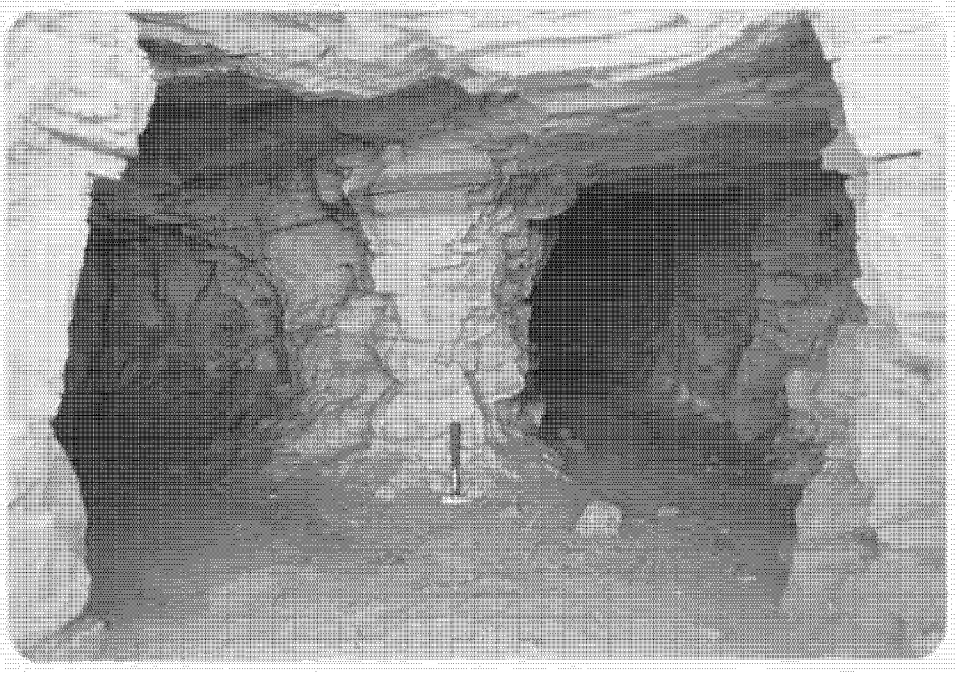


Photo B - Looking east inside adit. Note drift on left side of photo. Hammer in foreground for scale.

SS-187

Date Visited 10/24/79

Mine name(s) King Tutt #2 (MP-6 Sylvania Mining) County San Juan

Section _____ Twnsh. 29 N R. 21 W

Quadrangle sheet Red Rock Valley 15'

Mining district East Carrizo

Elevation 5550'

Nearest city and/or dwelling Oak Springs, 2 mi. NW

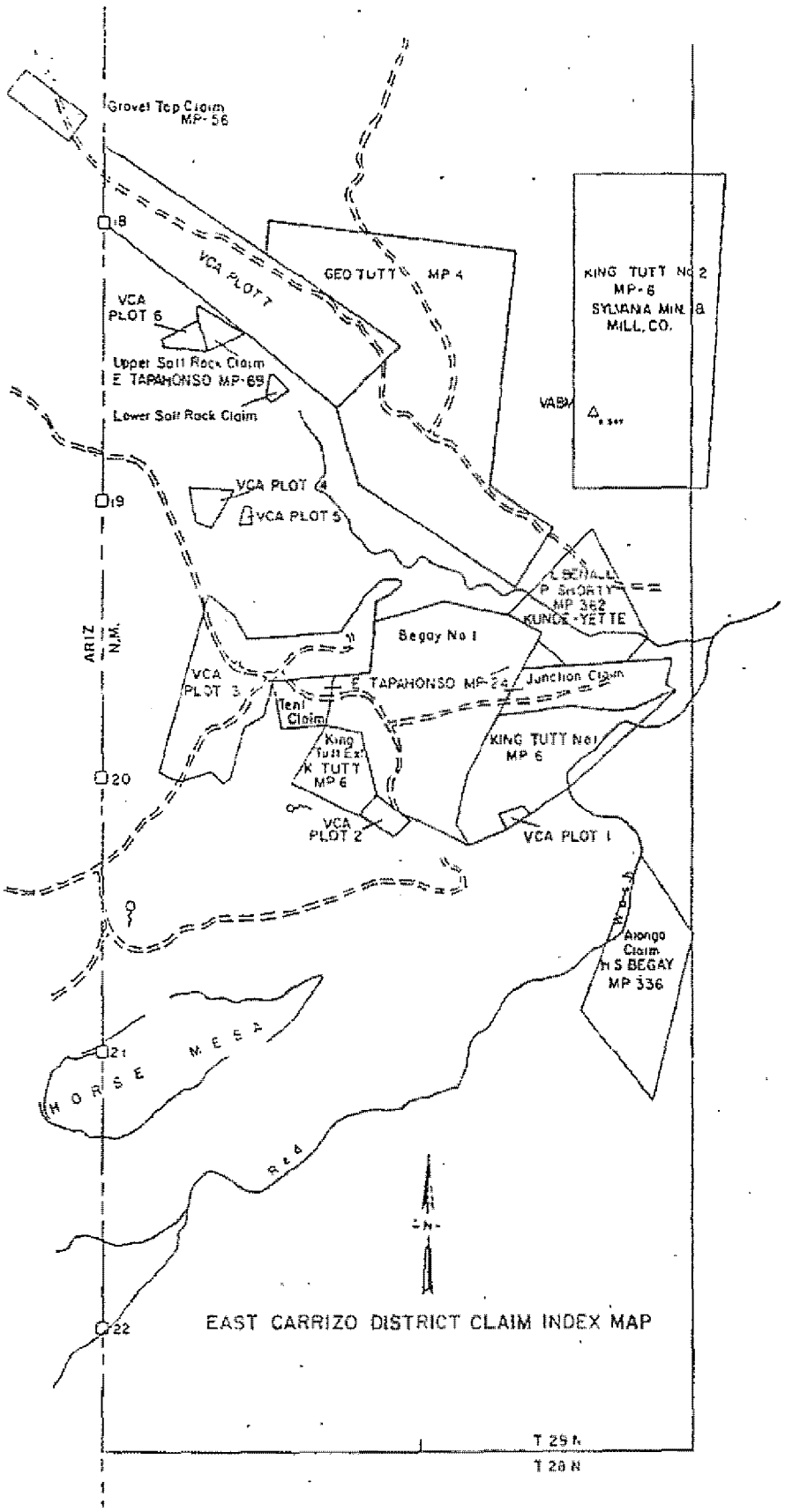
This claim is shown on the 1953 claim index map, just east of the Salt Canyon mines which are on what is labeled the George Tutt MP-4 claims. The AEC, however, shows no productions from these claims, nor were we able to find any workings in this area which may have produced any tonnage.

The conclusion is; no production from the King Tutt #2.

References: (1) Chenoweth, W.L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(2) East Carrizo District Claim Map, 1953.

SJ -128



53 · 184

REFERENCES FOR CARRIZO MINING DISTRICT

(1) AEC Office Memorandum, 1960, Field Examination of the John John #1 Tract.

(2) AEC-PED-1, 1959, Mine Operation Data Report, GJO/AEC.

(3) Chenoweth, W. L., 1980, Historical Review of Uranium-Vanadium in The Eastern Carrizo Mountains, San Juan County, New Mexico, U.S. DOE, TM-210.

(4) Chenoweth, William, and Malan, R. C., 1973, The Uranium Deposits of Northwestern Arizona, in New Mexico Geol. Soc. 24th guidebook, Monument Valley, pp. 139-149.

(5) Coleman, A. H., 1944, A report of the Geology and Ore Deposits of The Beclabito District, Carrizo Uplift Area, Arizona, RMO-469.

(6) Corey, A. S., 1958, Petrography of the Uranium-Vanadium Ores of the Nelson Point Mine, San Juan County, New Mexico; U.S. AEC, RME-122.

(7) East Carrizo District Claim Index Map, 1953.

(8) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico; USGS pp. 603.

(9) Hilpert, L. S., 1965, Uranium Section in Mineral and Water Resources, Bull. 87; pp. 216.

(10) Oral communication with Wm. Chenoweth, U.S. Dept. of Energy.

(11) Tipton, W. D., and Grundy, W. D., 1960, Field Examination of Alongo Tract (C-711), San Juan County, New Mexico, unpublished A.E.C. field report.

SJ-140

PREFACE TO CHUSKA DISTRICT REPORTS

The Chuska Mining District lies along or within several miles of the Arizona border in townships 25 and 26 N, and ranges 20 and 21 W (only one mine in R 21 W).

This area is unsurveyed and the land net projected into the district and used in the AEC publication, RME-111, 1959, was probably tied into a point 3 townships to the north in T 29 N. However, a correction line at the T 20-T 29 line offsets townships lying to the south nearly 1 mile to the west. In addition T 28 N is a short township which creates another correction at this point. The RME-111 land net did not, so it seems from the present investigation, take into consideration the correction offset or the short township, or perhaps the correction had not been surveyed and/or published at the time of the RME-111 release. Hilpert, 1969, however, also used the same land net projection used in RME-111, and at that time the correction offset had been published in the form of a 1:250,000 AMS series map entitled Shiprock, and undoubtedly elsewhere.

In the present investigation a new land net has been projected into the district based on the intersection of the T 25 N/T 26 N line and the R 19 W/R 20 W line, which intersection appears on the Sanostee West 7½' quadrangle. Hence, the section locations assigned to mines in the following reports will not agree with those of Hilpert, 1969, and in RME-111.

53-141

The 7½' minute topographic quadrangle sheet(s) used in this area is a composite of a preliminary edition of the Sonsala Butte 1 NE sheet and the Sanostee west sheet. The Lukachukai quadrangle sheet would cover the area under consideration, but it is a 15 minute quadrangle.

Orin J. Anderson

New Mexico Bureau of Mines and Mineral Resources
Socorro, New Mexico
June, 1980

SS-Rd

Chuska Mining District

Sanostee Area Mines With Recorded Uranium

Production: Source AEC Records Grand Junction,

Colorado, Courtesy William Chenoweth

Mine	Formation	Tons of Ore	Gr.	Lbs. U_3O_8
Carl Yazzie	Jms	23	.15%	66
Castle Tsosie	Jmr	12	.25%	60
Dennet Nezz #1	Jmr	131	.24%	639
Dennet Nezz #2	Jmr	113	.14%	327
Dennet Nezz #3	Jmr	7	.39%	60
H. B. Roy	Jt	6	.10%	11
Horace Ben	Jmr	8	.17%	13
Joe Ben #1	Jms	6	.36%	42
Joe Ben #3	Jms	219	.20%	884
John Joe	Jmr	94	.13%	243
Kee and Tohe	Jmr	47	.10%	90
Reed Henderson	Jt	24	.03%	14
Enos Johnson	Jmr	Active	-	-

In addition to these mines the geologic map (Figure 5 in RME-111) shows the David Kee Prospect, the Alfred Talk Prospect, and the Joe Ben #2; of the three only the latter one was visited. None of the 3 produced.

Road log from Junction of U.S. Highway No. 666 and Navajo No. 34 to Sanostee and The Chuska Mining District, San Juan County, New Mexico

by

O. J. Anderson

November, 1979

Road log from Junction of U.S. Highway #666 and Navajo #34 to Reed Henderson claims, Chuska Mining Dist., San Juan Co., N. M.

0.00 Cattleguard at junction of 666 and 34.

5.10

5.10 Gently dipping Gallup ss. fm., both sides of road.

1.4

6.50 Turn off at right to Sanostee Trading Post.

2.4

8.90 Cattleguard at right on entrance to Sanostee school, BIA campus. Turn right; cross the cattleguard and follow dirt road to west.

0.40

9.30 Road passes under power line.

0.50

9.80 Note hogans on left.

0.20

10.00 Road passes under power line.

0.40

10.40 Another power line crossing.

0.20

10.60 Note growth of tamarisks along Sanostee Wash on the right.

0.10

10.70 Minor junction, stay left.

0.20

10.90 Minor junction, stay left.

0.40

11.30 Road crosses Sanostee Wash.

0.40

11.70 Note small abandoned dwelling in cottonwoods on left; Mancos Shale - Gallup ss. contact in Mesa at right.

0.50

12.20 Road forks, stay left.

0.70

12.90 Note small village on right with Beautiful Mountain for backdrop.

0.60

13.50 Junction, windmill on right. Road to right goes to Beautiful Mountain, but a turnoff to the left at approx. 0.2 mi follows Sanostee Wash up to the Dennet Nezz, the Joe Ben, etc. Road to left continues on to the Enos Johnson turnoff and to the Reed Henderson claims. Stay on left fork and continue.

0.20

13.70 Road crosses Sanostee Wash.

0.30

14.00 Junction; right fork is road to Enos Johnson mine (active), and to the Carl Yazzie mine (abandoned); note white house on south side of this fork. Left fork, or straight ahead, is road to the Reed Henderson claims. Continue straight ahead on left fork.

0.25

SJ-146

14.25 Gate posts with discarded tire attached, on either side of road; note new house on right side of road set back about 400 ft.

0.40

14.65 Junction, in stream bed; turn to right (west) and begin climbing a dip slope.

3.10

17.75 At "Sage Meadow" junction; take right fork and continue on to Reed Henderson claims.

2.2

19.95 At Reed Henderson claim road; park and walk along "mine road" to right approx. 1/3 mi. to Reed Henderson claims and small open pit mine. The mine consists of a 75 ft long cut on the crest of a Todilto ls. capped cuesta, and views westward over Sanostee Canyon are spectacular. Production from the Todilto ls, here about 10 ft thick totaled about 24 tons of ore yielding 14 lbs. of U_3O_8 in the early 1950's (av. gr. = 0.03). Potential is considered nil.

For additional information on this and the other claims mentioned above - The Carl Yazzie, Dennet Nezz, Joe Ben, etc., see the following:

Blagbrough, J., et. al., 1959; Uranium Reconnaissance and Drilling in the Sanostee Area, San Juan Co., N.M., Apache Co., Ariz.; AEC RME-111.

Hilpert, L., 1969; Uran. Res. of NW New Mexico; U.S.G.S. pp. 603.

55-147

Date visited 11/14/79

Mine name(s) Dennet Nezz #1 and #2 County San Juan

Section (Unsurveyed) Probably 5 Twnsh. 25 N R. 20 W

Quadrangle sheet Sanostee West 7½'

Mining district Chuska

Elevation 6800'

Nearest city and/or dwellings Sanostee, 7 mi. E; other scattered single family dwellings within a 3 mi. radius.

The Dennet Nezz claims were staked in the N½ of Sec. 5, north of Sanostee Wash in the Recapture Member of the Morrison fm. The Dennet Nezz #1 and #2 are indistinguishable, hence are reported together. The workings consist of a 6' high by 6' wide adit driven westward into the hillside, see photo (a), and exploration or drill hole roads that wind up the slope above the adit (no photographs available). One or more areas along these roads may have been a bench cut or rim cut to which a separate name was given, e.g. #1 or #2. If so, slumping and erosion has obliterated the details thereof. Reduction was reported separately for the #1 and #2. The #1 was reported to have produced 131 tons of ore averaging .24% U_3O_8 (639 lbs. U_3O_8), and the #2, 113 tons of ore averaging .14% U_3O_8 (327 lbs. U_3O_8). The inclination would be to assign the higher grade ore to the underground workings, however, the adit is only 25' long and it is doubtful if more than 60 to 70 tons of material was taken out. A close-up view of the adit is given in photo (b); maximum scintillometer readings inside adit=120 cps. The ore is reported to have been in and around mineralized fractures in calcified logs, Hilpert 1969, p. 50.

Access to the claims is provided by dirt road leading west of Sanostee; at 5 mi. turn right at the road fork near windmill on north side of Sanostee Wash and stay on jeep trail that parallels the wash for 2 3/4 mi; workings are just to north at this point.

Reference: (1) Blagbrough, J., et. at., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area ..., AEC RME-111.
(2) Hilpert, L., 1969, Uran. Resources of NW New Mexico, U.S.G.S. pp. 603.
(3) AEC Production Records, courtesy Wm. Chenoweth U.S. Dept. of Energy.

SJ-1/2

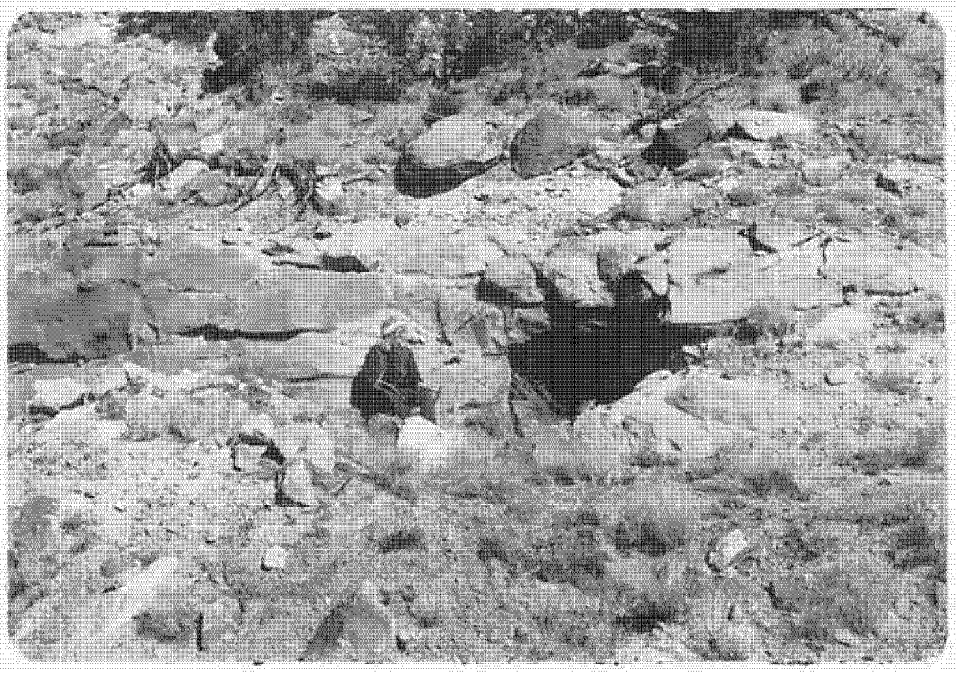


Photo (a) Dennet Nezz claim; looking east at small adit.

Photo (b) Dennet Nezz claims, looking east; close up of small adit shown in (a).

53-149

Date visited 11/14/79

Mine name(s) Dennet Nezz #3 County San Juan

Section (Unsurveyed) Probably 5 Twnsh. 25 N R. 20 W

Quadrangle sheet Sanostee West

Mining district Chuska

Elevation Approx. 6800'

Nearest city and/or dwellings Sanostee, 7 mi. E; other scattered single family dwellings within a 3 mi. radius.

Although The Dennett Nezz #3 claims reported production separate from the #1 and #2, no recognizable workings were found at or near the location specified by Blagbrough, et. al., 1959, fig. 5. Exploration and drill hole roads pass through the area in question and perhaps a small road cut may have been worked as a rim cut or bench cut. However, no anomalous scintillometer readings were recorded along the roads traversed in the area.

Total production was listed as 7 tons of ore from the Recapture member of the Morrison fm., averaging .39% U_3O_8 (60 lbs. U_3O_8). Deposit reportedly was worked as an open cut in 1955; the ore occurred in and around fractures in calcified logs.

Reference: (1) Blagbrough, J., et. al., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area ..., AEC RME-111.
(2) Hilpert, L., 1969, Uran. Resources of NW New Mexico, U.S.G.S. pp. 603.
(3) AEC Production Records, courtesy Wm. Chenoweth U.S. Dept. of Energy.

NM-49-Z-1001

Date visited 11/6/79

Mine name(s) (Unnamed) Sec. 8 Adit County San Juan

Section (Unsurveyed) 8 Twnsh. 25 N R. 20 W

Quadrangle sheet Sanostee West 7½'

Mining district Chuska

Elevation 7,100'

Nearest city and/or dwellings Sanostee, 7 air miles east; additional single family dwellings in 3-4 mi. radius.

This adit was found while doing an exploratory traverse generally northeastward from the Enos Johnson Mine toward Sanostee Wash. It is located about 1/2 air mile E NE from the Joe Ben #3, in the Recapture member of the Morrison Fm., driven eastward into an alternating red sandstone-maroon to greenish gray mudstone sequence. Photo (a) shows the adit from across the canyon, photo (b) shows the access road, below which is the mine dump, and photo (c) is a close up of the 7' x 9' portal. The adit is about 50' long, untimbered, but in good stable condition; two prominent mudstone lens can be traced into the adit and probably are uraniferous (no scintillometer readings available).

Site can be reached by following road which parallels Sanostee Wash up to the approximate locality of the Joe Ben #1 and #2 turnoff. From here on the journey is on foot and necessitates climbing the south wall of Sanostee Wash Canyon for several hundred feet to reach the Joe Ben #3, then eastward along the canyon along an exploration/drill road. Can also be reached by a walk from the active Enos Johnson Mine (see the Chuska District map).

Reference: (1) Field notes, 11/6/79.

53-K1

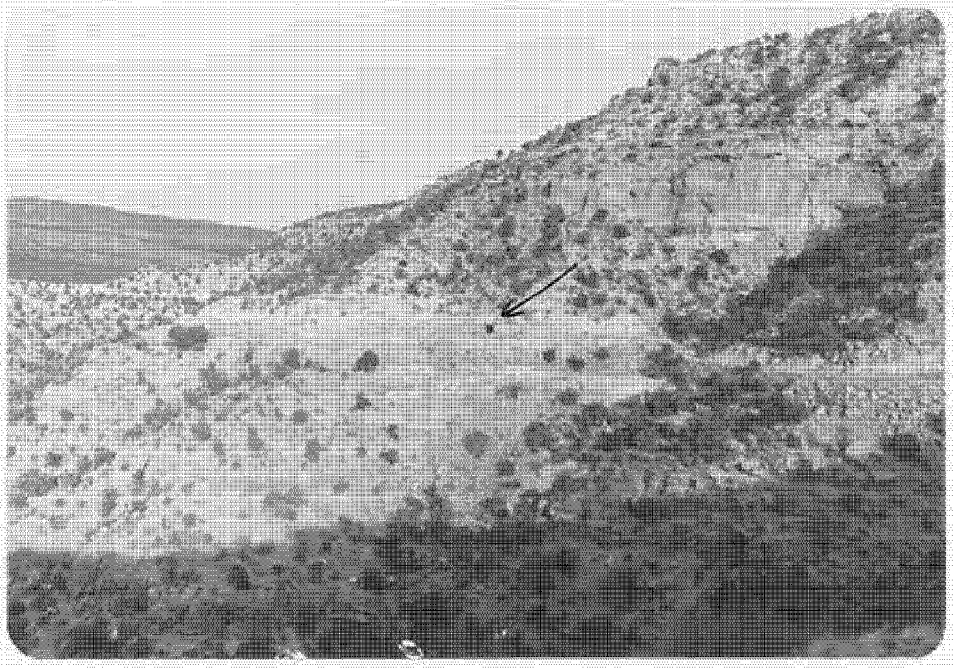


Photo (a) Looking eastward at portal of adit (shown by arrow) in Sec. 8; road at adit level in Recapture member continues to the active Enos Johnson Mine.

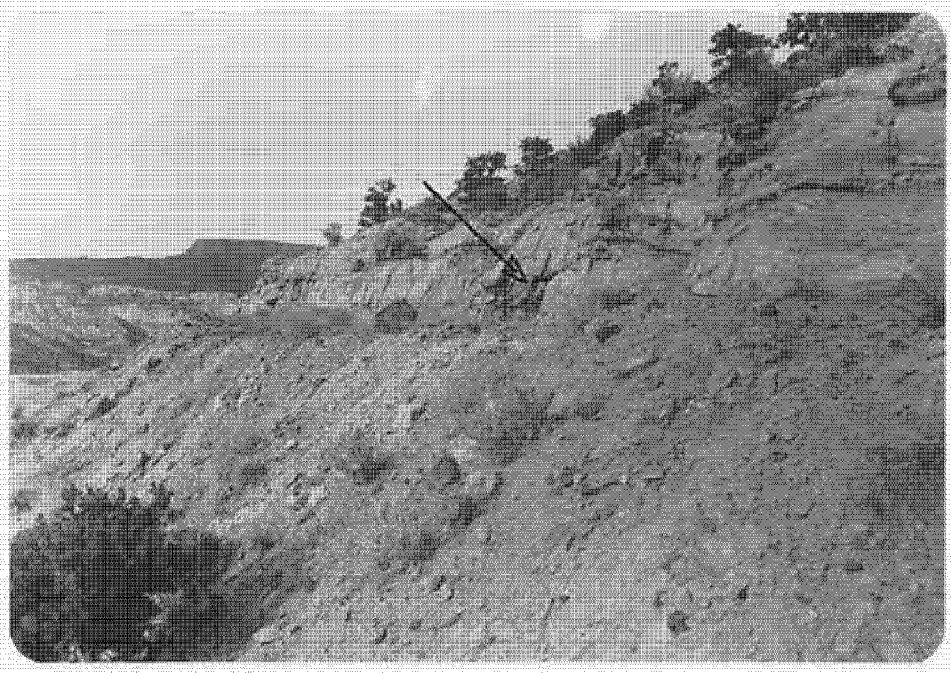


Photo (b) Looking northeastward at adit (arrow); a small portion of the excavated material mantling lower slope is mine waste, but larger portion is from road construction.

SJ-152

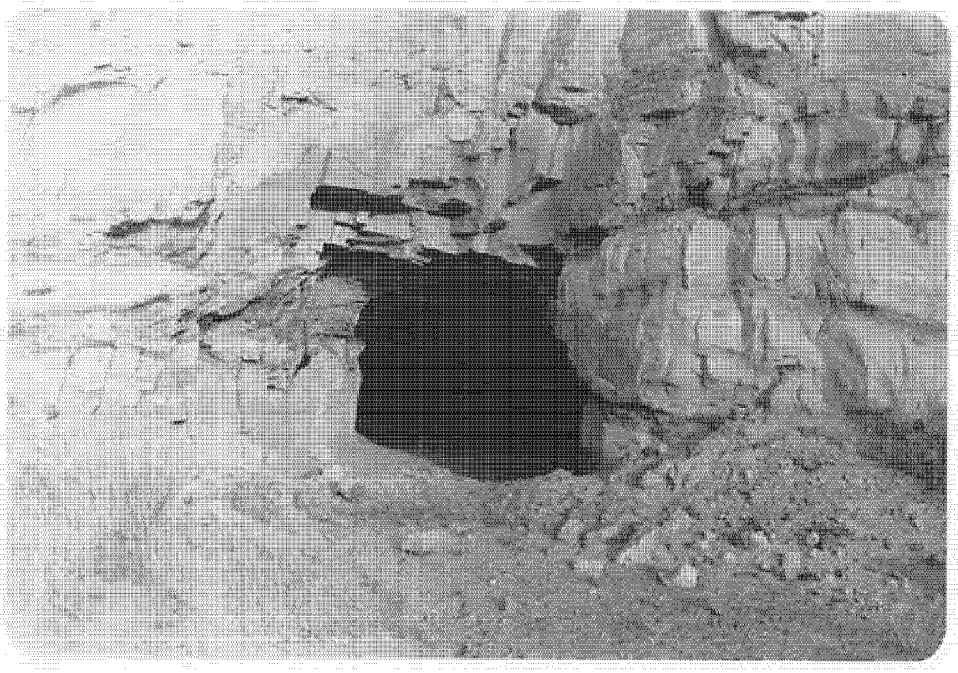


Photo (c) Looking eastward into 7'x 9' portal of Sec. 8 adit; note field glasses hanging at left of portal for scale.

NM-49-2-3

Horace Ben

The Horace Ben Mine was not found.

55-154

Date visited 11/13/79

Mine name(s) Kee and Tohe County San Juan

Section (Unsurveyed) Probably 31 Twnsh. 26 N R. 20 W

Quadrangle sheet Sonsala Butte 1 NE

Mining district Chuska

Elevation 7400'

Nearest city and/or dwellings Sanostee, 8 mi. E; additional scattered single family dwellings within 3-4 mi. radius.

The Key and Tohe Mine consists of an adit about 27' long flanked by what is probably a powder magazine on the left and a stub adit (or another powder mag.) on the right, all driven northwestward into the upper part of the Recapture member of the Morrison fm. Photo (a) shows the powder magazine on the left, the dump from adit to the immediate right, and the stub adit to right of the dump (arrow points to dump). Photo (b) is a close up of the main adit showing material caved from the face partially blocking the 6'x6' entrance; scintillometers readings in the adit ranged up to 400 cps; no mineralization is apparent.

The powder magazine and stub adit, which are the first to come into view in approaching the mine, are each only 6'-8' long; none of the underground workings are particularly dangerous; the main adit is nearly sealed off by the caving already mentioned, but a man could still enter. This adit was probably tracked, or plans were made to track it, as an ore cart remains at the site (see photo e).

Access is by dirt road west of Sanostee for 5 mi.; then a right turn at the road fork near windmill. Follow Sanostee Wash up to vicinity of the Dennet Nezz #1 and #2 workings (about 2 3/4 mi.). From this point on the journey is on foot.

The mine reportedly produced a total 47 tons of ore averaging .10% U_3O_8. The ore contained about 90 lbs. of U_3O_8. Although the upper Recapture member has yielded the largest deposits in this area (The Enos Johnson Mine) the potential at the Key and Tohe would appear to be extremely limited to nil.

References: (1) Blagbrough, J., et. al., 1959, Uranium Reconnaissance and Drilling in The Sanostee Area ..., AEC RME-111.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico USGS pp. 603.
(3) AEC Production Records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.

ST-15

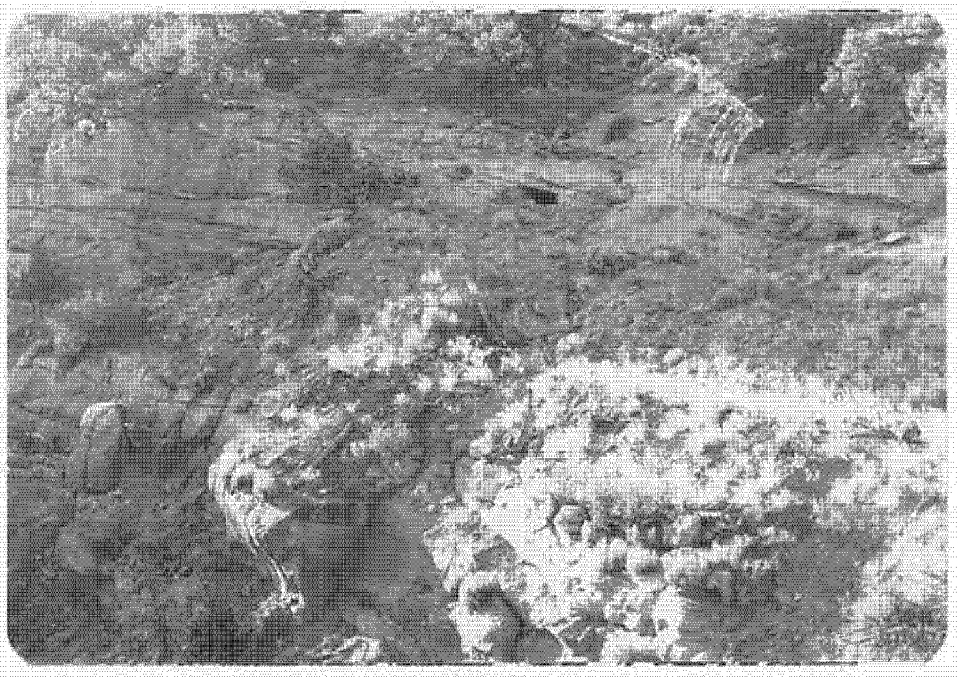


Photo (a) Key and Tohe Mine, looking N NW at the adit (arrow) blocked from view by tailings dump; flanking it are a powder magazine, left, and a short adit, right.

Photo (b) Key and Tohe adit, close up; face caving has nearly blocked adit entrance.

ST-156

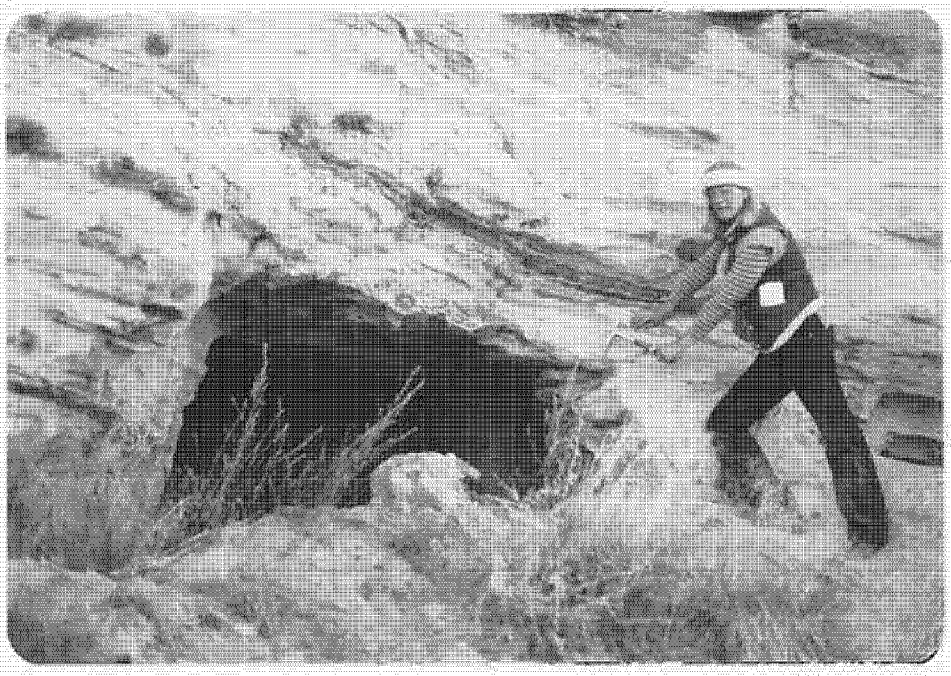


Photo (c) Key and Tohe workings; powder magazine to left of main adit.

Photo (d) Key and Tohe workings; short adit to right of main adit.

EJ-157

Photo (e) Key and Tohe mine site; tracked ore cart out front of main adit.

AZ-60-1-2

John Joe

The John Joe mine was not found.

AZ-60-1-3

Castle Tsosie

The Castle Tsosie mine was not identified.

55:157

Date visited 11/14/80

Mine name(s) Joe Ben #2 Prospect County San Juan

Section (Unsurveyed) 6 Twnsh. 25 N R. 20 W

Quadrangle sheet Sonsola Butte 1 NE, 7½'

Mining district Chuska

Elevation

Nearest city and/or dwellings Sanostee, 7½ mi. east; additional single family dwellings within a 3-4 mi. radius.

The workings at the Joe Ben #2 consisted of very minor rim stripping in the Salt Wash member of the Morrison fm. along the east side of a small canyon which is tributary to Sanostee Wash. Erosion and slumping has probably obliterated the exact locality and extent of the workings. All that remains is a small pile of rubble or waste rock and a few scattered sticks of Giant Brand explosives, (see photo a). The dynamite comprises the only hazard, whatsoever, at the site. There is no reported production from the property.

Site can be reached by vehicle; side road leads northward from road along Sanostee Wash in Sec. 5; (see Chuska district map).

References: (1) Blagbrough, J. W., et. al., 1959, Uranium Reconnaissance and Drilling in The Sanostee area ...". U.S. AEC RME-111.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mex., U.S.G.S. Prof. Paper 603, p. 50.
(3) U.S. AEC Production Records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.
(4) Field notes, 11/14/79.

SJ 160

Photo (a) Joe Ben #2 prospect; dynamite sticks about 5 in. long laying in area showing minor disturbance.

53-161

Date visited 11/14/80

Mine name(s) Joe Ben #1 Prospect County San Juan

Section (Unsurveyed) 6 Twnsh. 25 N R. 20 W

Quadrangle sheet Sonsala Butte 1 NE, 7½'

Mining district Chuska

Elevation 7,000'

Nearest city and/or dwellings Sanostee, 8 mi. east; additional single family dwellings within a 3-4 mi. radius.

The Joe Ben Prospect is no more than a radiometric anomaly in the lower Salt Wash member of the Morrison Fm. (see photos a & b). A side road off the road paralleling Sanostee Wash leads directly to this site, but there are no recognizable workings or disturbance (see Chuska district map).

The anomalous readings of up to 230 cps (or 4 x background)were found just below a pronounced bedding plane in massive, medium to fine grained, red to brownish red sandstone (see again photo b). No uranium mineralization was noted.

Reportedley 6 tons of ore averaging .36% U_3O_8 were shipped from the property (A.E.C. production records) in 1952, but other than the road no ground disturbance was noted.

References: (1) Blagbrough, J. W., et. al., 1959 Uranium Reconnaissance and Drilling in the Sanostee area ...". U.S. A.E.C. RME-111.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603, p. 50.
(3) U.S. A.E.C. Production Records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.

SJ-162

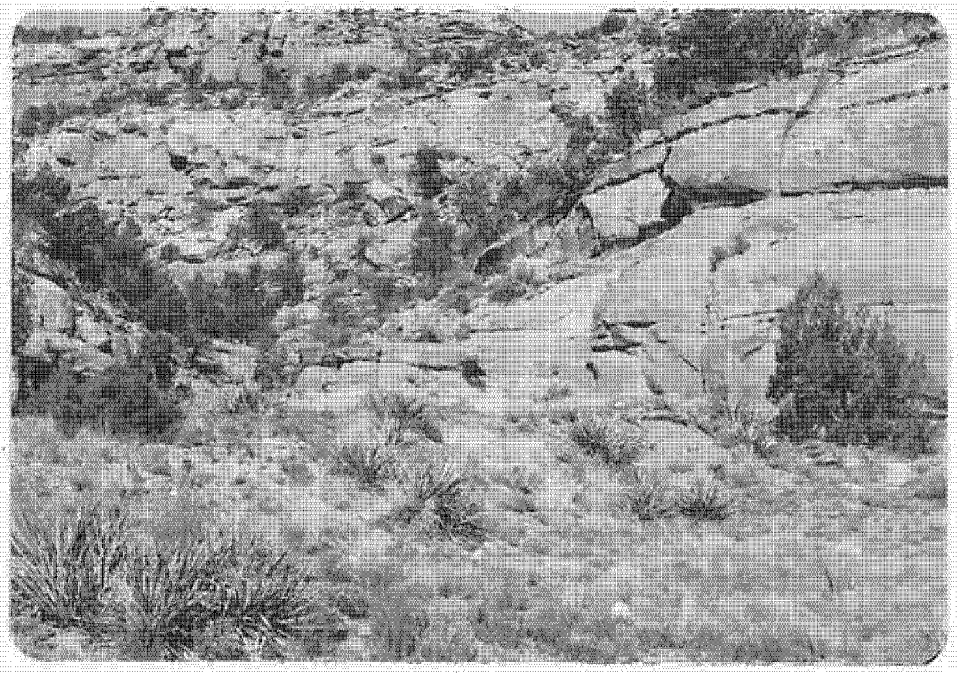


Photo (a) Looking E, at the Joe Ben #1 prospect on south side of small canyon.

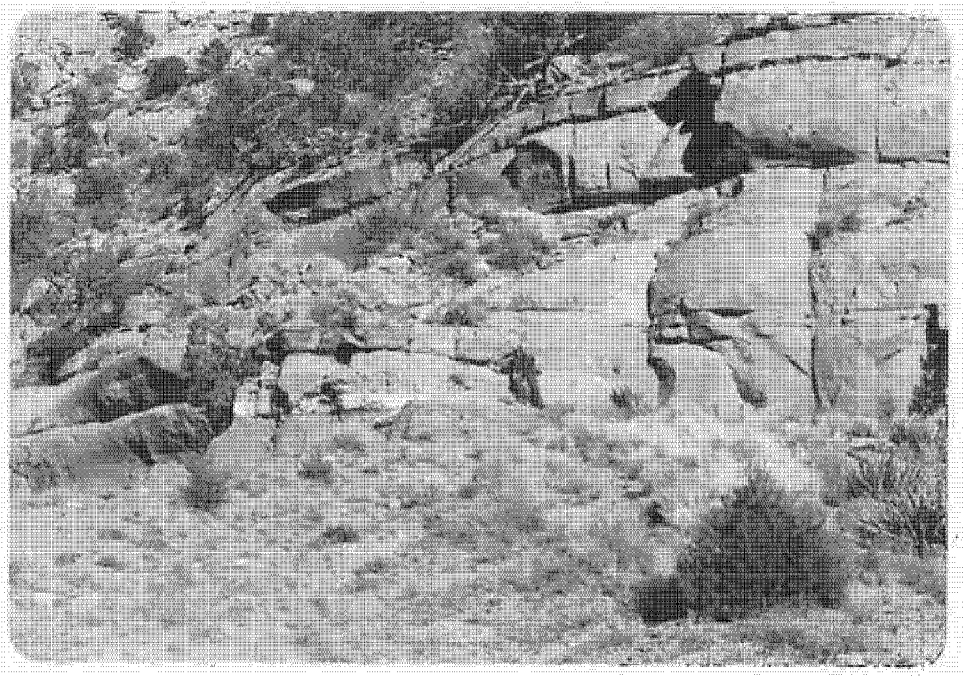


Photo (b) Close up of view shown in photo (a); person in photo is pointing to parting having radiometric anomaly.

AZ-60-1-6

Date Visited 11/6/79

Mine name(s) Joe Ben #3 County San Juan

Section (Unsurveyed) Sec. 8 Twnsh. 25 N R. 20 W

Quadrangle Sheet Sonsala Butte #1, NE, 7½'

Mining district Chuska

Elevation 6900'

Nearest City and/or dwelling Sanostee, 7 mi. E.

The major workings on the Joe Ben #3 consists of 125' of rim stripping along the NW side of a Salt Wash sandstone nose just 1/2 mi. N of the Enos Johnson Mine. The cut is shown from above in photo (a); the resulting bench is up to 30' wide and a small tailings dump extends downslope for several hundred feet at the angle of repose.

A close-up of the cut, see photo (b), shows that the sandstone beds are interrupted repeatedly by shale (mudstone) lenses. Although it has been thought that the Salt Wash is most favorable where the sandstone-mudstone ratio is about 1:1 (Gruner, 1956), as it is at this locality, the deposits are often too small to be mineable. Further north toward the Carrizo district, the mudstone percentage in the Salt Wash decreases and the deposits become somewhat larger.

According to Blagbrough, 1959, exploration on the Joe Ben #3 claim totaled about 2500' of rim stripping in the Salt Wash member mostly during the summer of 1953. Many of the small cuts are indistinguishable from exploration roads. There are, however, two adits in the vicinity of the Joe Ben #3 cut described above. It is not certain they are on the Joe Ben #3 claim, but will be included here because of their proximity and for the sake of convenience. One is a 5' x 5' opening located approximately 1000' to the SW of the cut; the length of this adit is not known for certain, but judging from the size of the tailings dump it probably is no more than 15'-20', (no photograph available). The other is a 4' high by 5' wide opening located approximately 1/4 mi. to the NE of the cut on the other side of the prominent spur, see photo (c). It is about 15' long and driven generally westward into a massive sand unit of the Salt Wash member; some crude timbering remains in place. A scour and fill feature is visible just above the adit entrance.

Access is provided by dirt road leading west of Sanostee; at approximately 5 mi. take right fork after passing windmill and follow jeep trail along Sanostee Wash for 3½ mi. At this point the Joe Ben #3 cut will lie above on canyon wall to south; the last ½ mi. is made on foot.

Total production from the Joe Ben #3 was reported as 219 tons of ore averaging 20% U_3O_8; contained U_3O_8 was 884 lbs. U:V ratio of samples taken on this claim are about 1:2.5.

(turn)

SJ-164

References: (1) Blagbrough, J., et. al., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area...; AEC RME-111.
(2) Gruner, J., 1956, Concentration of Uranium in Sediments by Multiple Migration-Accretion; Econ. Geol., vol. 51, no. 6.
(3) Hilpert, L., 1969, Uranium Resources of NW New Mexico; U.S.G.S. PP 603, p. 50.
(4) AEC production records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.

SJ-165

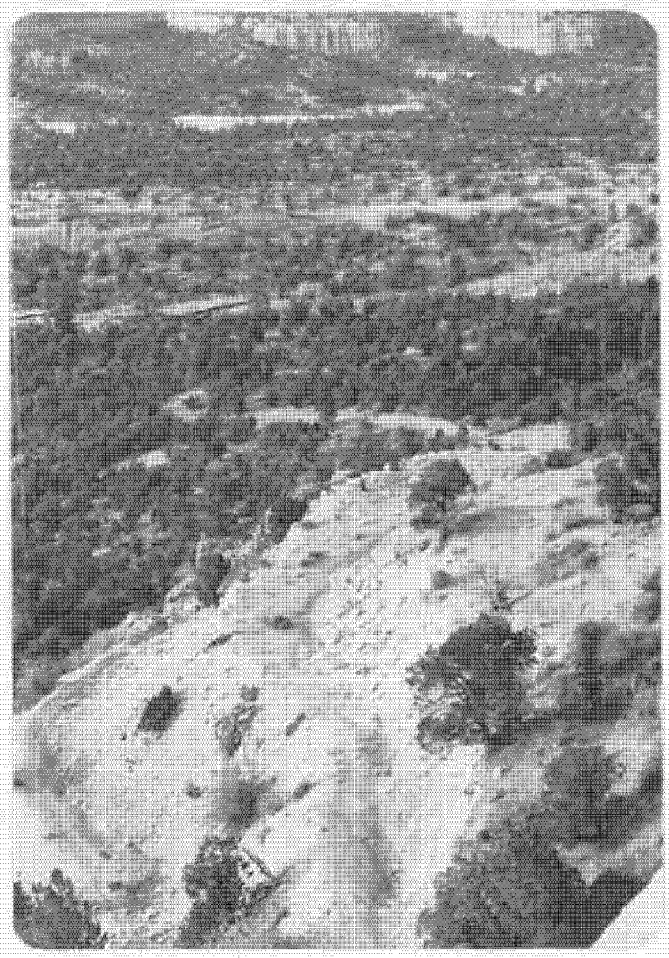


Photo (a) Joe Ben #3 rim cut; looking N from cliff top.

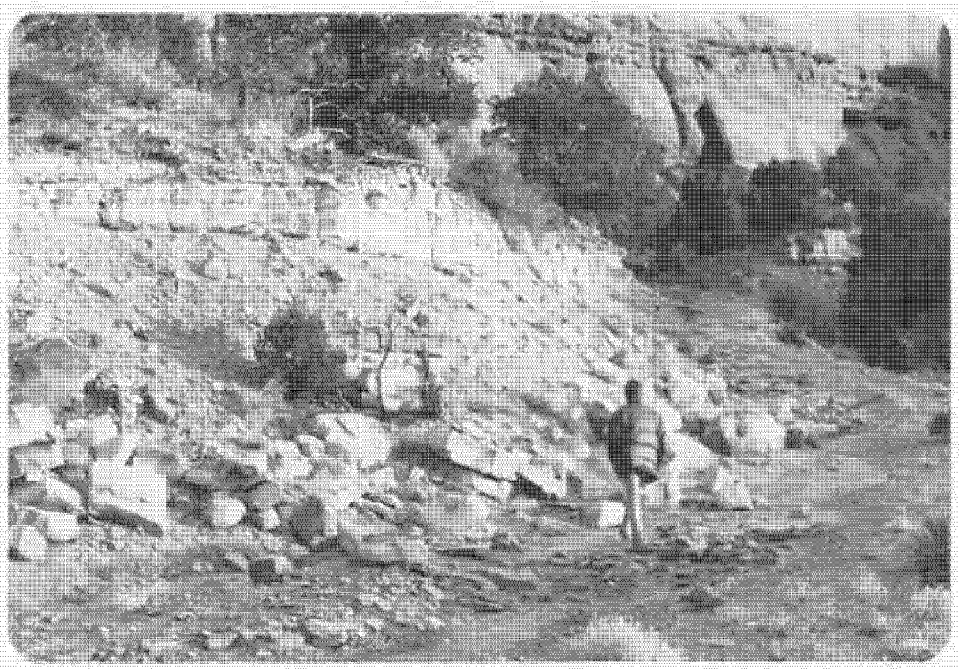


Photo (b) Joe Ben #3 rim cut; looking S. Note numerous shale (mudstone) beds at this locality.

ET-166

Photo (c) Adit in Salt Wash member, thought to be on Joe Ben #3 claim; looking westward. Note field glasses hanging above adit entrance for scale; also note scour and fill feature above and to right of adit.

AZ-60-1-7

ENOS JOHNSON

The Enos Johnson mine is an active mine.

Az-6D-1-8

Date visited 11/6/79

Mine name(s) Carl Yazzie #1 County San Juan

Section 17 (Projected) Twnsh, 25 N R. 20 W

Quadrangle sheet Sonsala Butte 1 NE 7½'

Mining district Chuska

Elevation 7000'

Nearest city and/or dwellings Sanostee, 7 mi. E

The Carl Yazzie #1 consists of two adits each of which is split into two drifts a short distance in. They are both driven generally southeastward into a 25' high face that was worked as an open cut before the mine went underground (see photo a).

The adit on the right in the photo contained standing water in a shallow pond back from the entrance. It is approximately 5' high, 5' wide, and 10' into the tunnel it splits into two which go off at 45° angles to each other. The left drift is the largest ranging up to 14' in width and contains the water about 25' back from the split; water is actively dripping from roof. The right drift goes back about 20' and contains a very small pool of water. Scintillometer readings obtained were in the 1200-1600 cps range, with local face counts up to 2000 cps.

The adit on the left in the photo is about 6' high, 7' wide and is also split a short distance in. The left drift goes back about 18', the right about 22'; each contains a small pool of water, and each produced scintillometer readings in the 600-1000 cps range (see Table 1 for water quality data).

The adits are driven in the Salt Wash Member of the Morrison Formation which here appears as oxidized ground, although some finer grained zones may be incompletely oxided. Evidence of uranium mineralization is mainly in the form of an oxidized yellow-green encrustation on rock faces in the adits, which have formed since development of the mine. Tailings dump lies to west of adits a short distance; it is 40' long, up to 5' high. Access is provided by dirt road leading west of Sanostee for approx. 5 mi., then left at a road fork just north of Sanostee Wash for another 3 mi. This road is currently used as an ore haul road for the nearby Enos Johnson Mine; (see Topographic sheet).

The mine was operated during the early and mid 50's and produced a total of 23 tons of ore averaging .15% U_3O_8; the ore contained 66 lbs. of U_3O_8 with a U:V ratio of about 1:3.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. pp. 603, p. 50.
(2) Blagbrough, J., et, al., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area..., AEC RME-111.
(3) AEC production records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.

SJ-169

Photo (a) Carl Yazzie #1; looking SE. Note person in front of right adit for scale. Small tailings dump lies off to the right.

TABLE 1

Selected Water Quality Data, obtained
From Sample Taken Inside Left Adit

Conductivity in mmhos/cm^3	pH	in ppm			
		Fe	SO_4	U_3O_8	Se
1,900	7.2	<.1	160	.40	<.005

Az-60-1-9 Date visited 11/7/79

Mine name(s) H. B. Roy #2 County San Juan

Section (Unsurveyed) Probably 18 Twnsh. 25 N R. 20 W

Quadrangle sheet Sonsala Butte 1 NE, 7½'

Mining district Chuska

Elevation 7100'

Nearest city and/or dwellings Sanostee, 8 mi. E NE

The H. B. Roy #2 consists of two end to end bench cuts on the southwestern side of a spur in the SE¼ of Sec. 18 (projected). It appears that the northern cut was mined and the southern cut was merely a road widening to provide for a stockpile and load out facility (however very little ore was produced). Photo (a) looks eastward at the northern bench cut which presumably intersected some ore bearing Todilto ls. at the base; exposed 15' high face is Summerville fm. Scintillometer counts were approx. 200 cps, or 3 x background. The stockpile or dump area 100' to the S SE, shown in photo (b) gave scintillometer readings up to 450 cps, or approx. 7 x background; this area is about 150' long and up to 50' wide.

Access at present is by foot; the road system in the area is unclear. It is nearly a 1 mile walk from the Carl Yazzie #1.

The mine reportedly produced a total of 6 tons of Todilto ls. ore, which averaged .10% U_3O_8 and contained 11 lbs. of U_3O_8.

The H. B. Roy #1 is a prospect in the Recapture member of the Morrison fm. located to the north in Bear Creek Canyon; it has no reported production. Hilpert, 1969, p. 51 is probably referring to the H. B. Roy #1 rather than the #2 in his descriptive tabulation.

Reference: (1) Blagbrough, J., et. al., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area ...; AEC RME-111.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico; U.S.G.S. pp.603, p. 51.
(3) AEC production records, courtesy Wm. Chenoweth U.S. Dept. of Energy

SJ-170

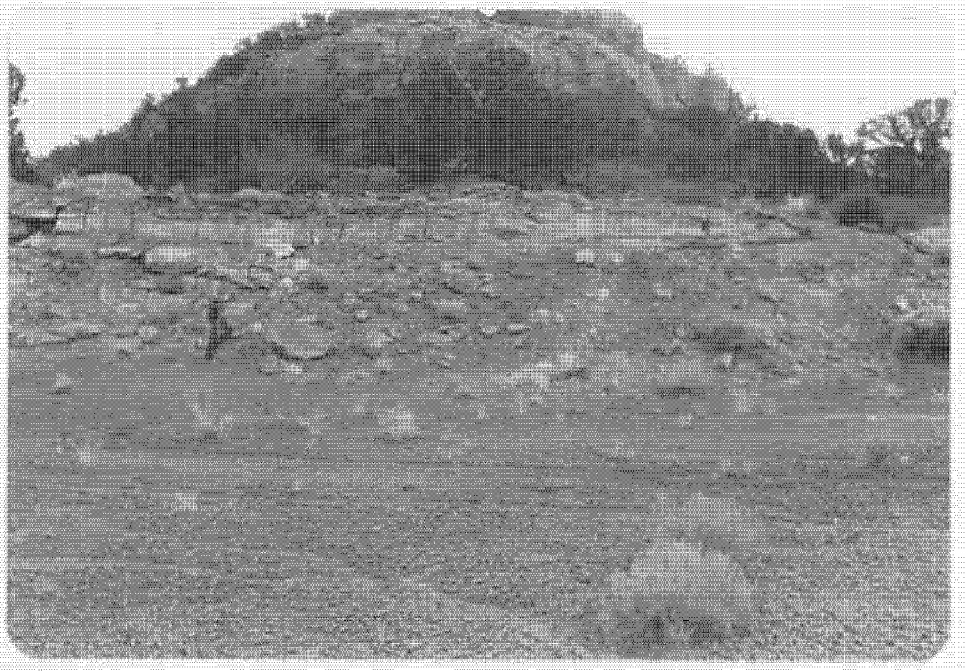


Photo (a) H.B. Roy #2, looking E into 15' high bench cut.

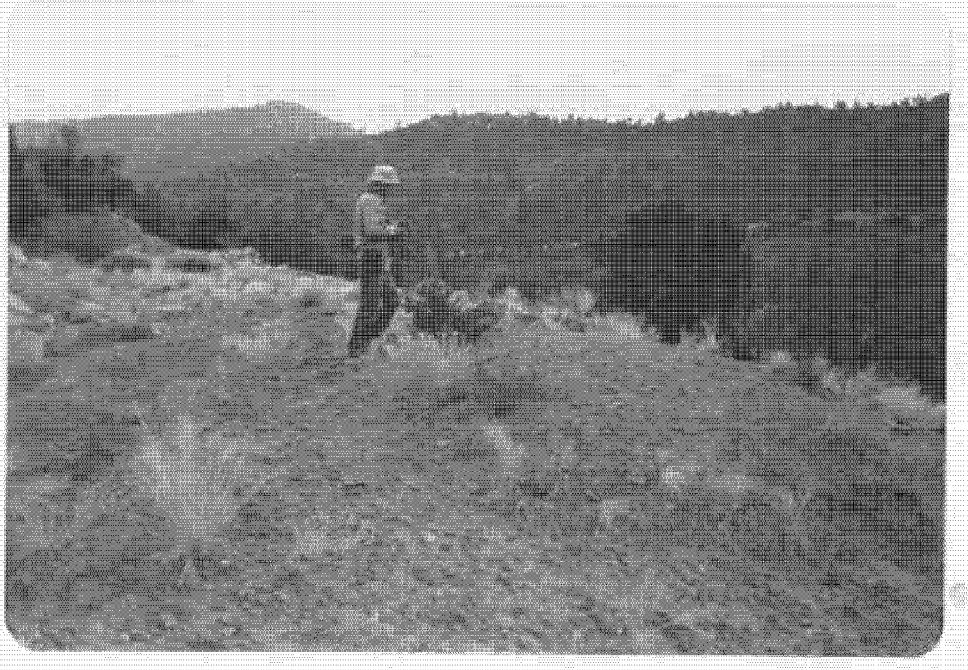


Photo (b) H.B. Roy #2, looking SW at ore stockpile/dump area.

SJ-173

Date visited 11/15/79

Mine name(s) Reed Henderson (Reed Henderson Claims) County San Juan

Section (Unsurveyed) 19 Twnsh. 25 N R. 20 W

Quadrangle sheet Sonsala Butte 1 NE, 7½'

Mining district Chuska

Elevation 7,800'

Nearest city and/or dwellings Sanostee, 9 mi. E NE; additional single family dwellings scattered throughout area.

The Reed Henderson workings in projected section 19 consist only of a 75' long by 30' wide open cut on the western edge of a Todilto limestone capped cuesta, (see photo a). The pit or cut is no deeper than 3 feet at any place, and would be very difficult to find were it not for the road leading into the site. No definite uranium mineralization found at this site, however, Hilpert, 1969 stated that "deposits (of tyuyamunite and metatyuyamunite) are principally on the flanks of intraformational anticlinal folds, which have amplitudes of as much as 1 to 2 feet, are about 3 feet wide, and 10-15 feet long. The limestone is mineralized in areas of most intense folding."

Minor folding was noted at the site, but scintillometer readings even in these areas were only 300 to 400 cps. Records show that 24 tons of Todilto limestone ore averaging .03% U_3O_8 was shipped in 1954.

Photo (b) offers another view of the disturbed area, and photo (c) gives some indication of the rugged topography in the area. Photo (d) shows a Navajo camp a few hundred feet southeast of the prospect; it is used primarily for pinon nut collecting.

A complete road log discribing the route to this site has been included following photo (d). See also the Chuska District map.

References: (1) Blagbrough, J. W., et. al., 1959, Uranium Reconnaissance and Drilling in the Sanostee area ..." U.S. AEC RME-111.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603, p. 51.
(3) U.S. AEC Production Records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.
(4) Field notes, 11/15/79.

SJ 174

Photo (a) Looking N, at Reed Henderson claim workings; disturbed area in foreground measures about 70' in length, up to 30' wide. Site has largely revegetated itself.

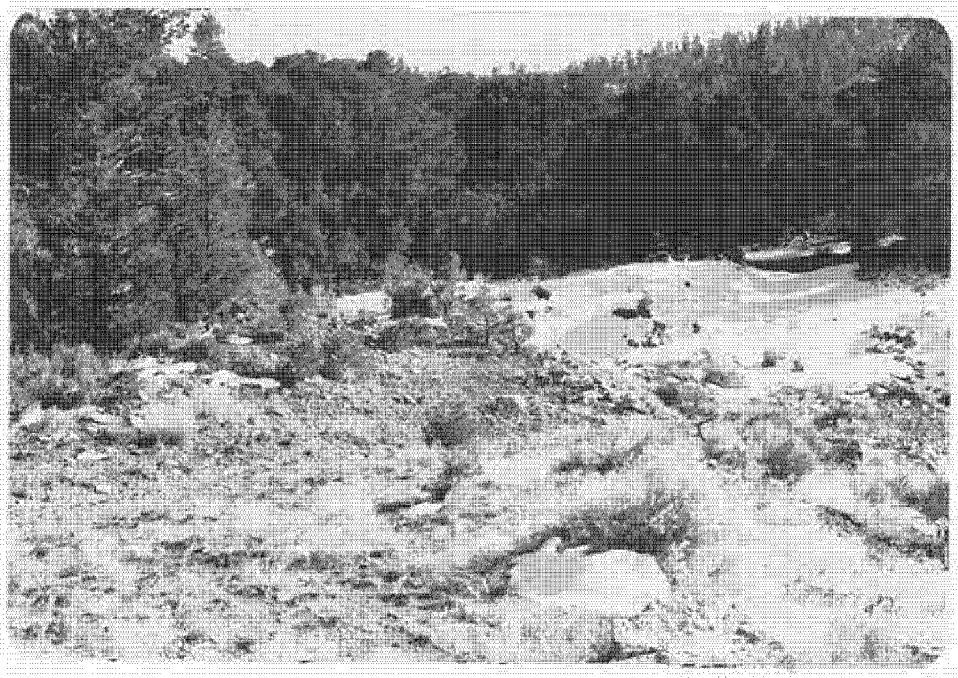


Photo (b) Looking SE at Reed Henderson claim workings, showing southern edge of disturbed area; ponderosa pine seedlings at center middle distance are about 3' tall.

SJ-175

Photo (c) Looking SW from same vantage point as photo (b), showing canyon of Sanostee Wash with Chuska Mtns. in background.

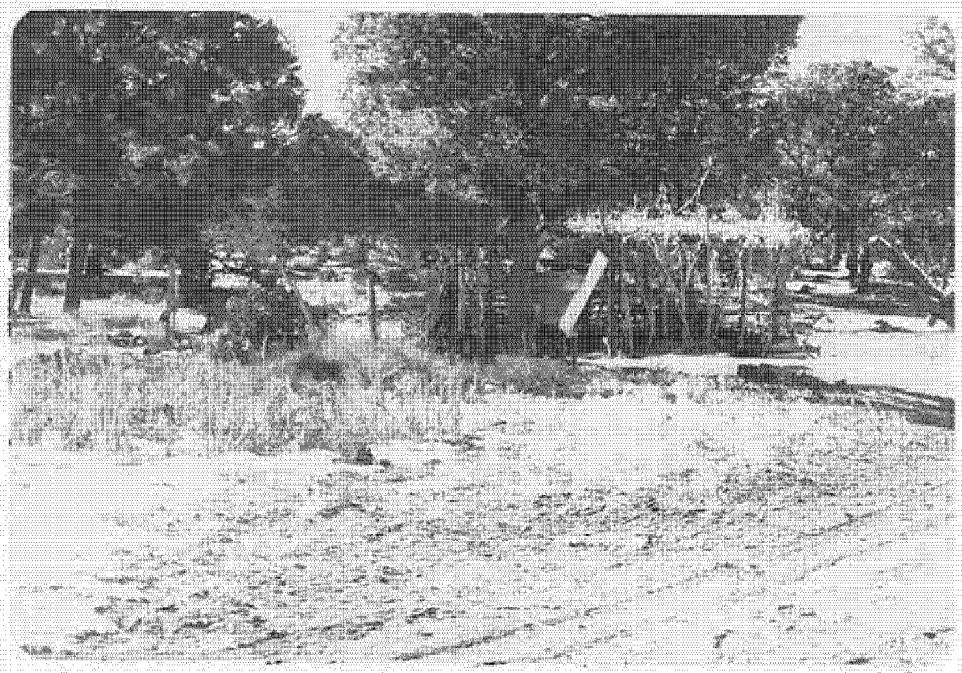


Photo (d) Navajo pinon nut collecting camp several hundred feet from Reed Henderson workings.

53-17e

REFERENCES FOR CHUSKA DISTRICT

(1) AEC Production Records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.

(2) Blagbrough, J. W., et. al, 1959, Uranium Reconnaissance and Drilling in The Sanostee Area..., AEC RME-111.

(3) Gruner, J., 1956, Concentration of Uranium in Sediments by Multiple Migration-Accretion; Econ. Geol., Vol. 51, No. 6.

(4) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. pp. 603.

OTHER SAN JUAN CO. MINES

NM-2-O-1

Date visited March 17,1980

Mine name(s) Hogback Claim County San Juan

Section 15 Twnsh. 30N. R. 16W

Quadrangle sheet Chimney Rock 15'

Mining district (sole occurrence) numerous abandoned Menefee Coal mines in area

Elevation 5,350'

Nearest city and/or dwellings Waterflow, 4 air miles south; numerous other single family dwellings in the area

The Hogback claim is located in the SW-1/4, Sec 15, 30N, 16W. It may be reached by turning north onto the dirt road 8 mi. east of Shiprock at the Hogback. At about 5 mi. the remains of the Davidson coal mine may be seen near the high voltage power transmission line. Claims are .2 mi north of power line on west side of road.

Workings on the claim consist of 3 very small bulldozer cuts. The main one, shown in photo (2), is closest to the road and measures about 20' x 25', up to 2½' deep, with a 4' high waste pile at the east end (photo b). Scintillometer readings here ranged up to 2,000 cps with the highest counts being recorded at the northeast corner of the pit on a bedrock face.

The other two pits lie about 100' to the west of the main one, are much smaller, and have much lower radioactivity values--about 300 cps maximum. They are shown in photos (c) and (d).

Host rock is a yellowish brown to dark grayish brown fine-grained sandstone of the Point Lookout fm. It is actually a tongue of the Point Lookout up in the Menefee fm. (Chenoweth & Carithers, 1955). Mineralization is about 5' below the lowest Menefee Coal bed. The deposit is located on the Hogback monocline which here dips about 10°E.

Several samples collected and assayed by the U.S. AEC showed U_3O_8 grades in the .01 to .003% range (chemically) with radiometric grades up to an order of magnitude higher (Chenoweth & Carithers, 1955). One load of ore was taken out, but was refused at the Shiprock mill.

References

1. Chenoweth, W. L. and Carithers, W., 1955, Preliminary Reconnaissance Report-Hogback claims, U.S. AEC Prr ED:R - 456.

2. Hilpert. L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.

3. Field notes, 3/17/80.

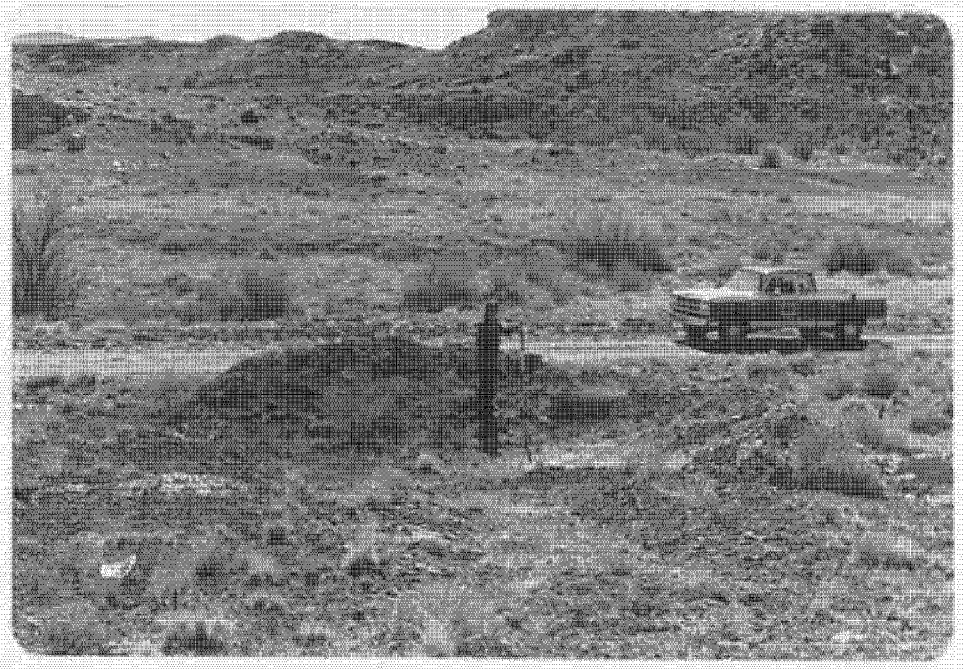


Photo (a) Hogback claim, main pit, looking east

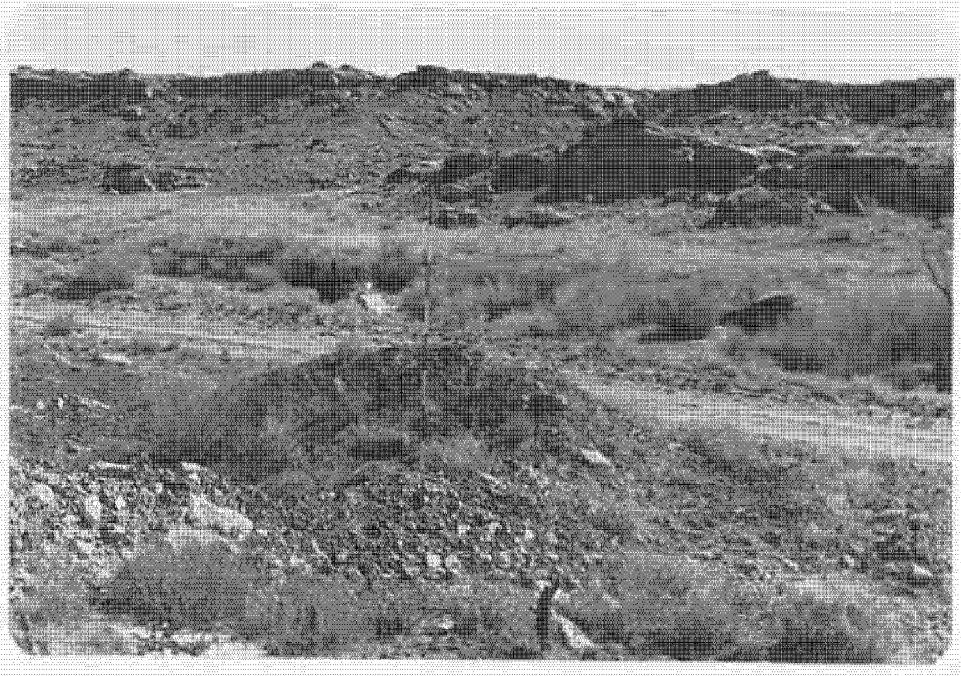


Photo (b) Hogback claim, east end of main pit and waste pile; looking northeast.

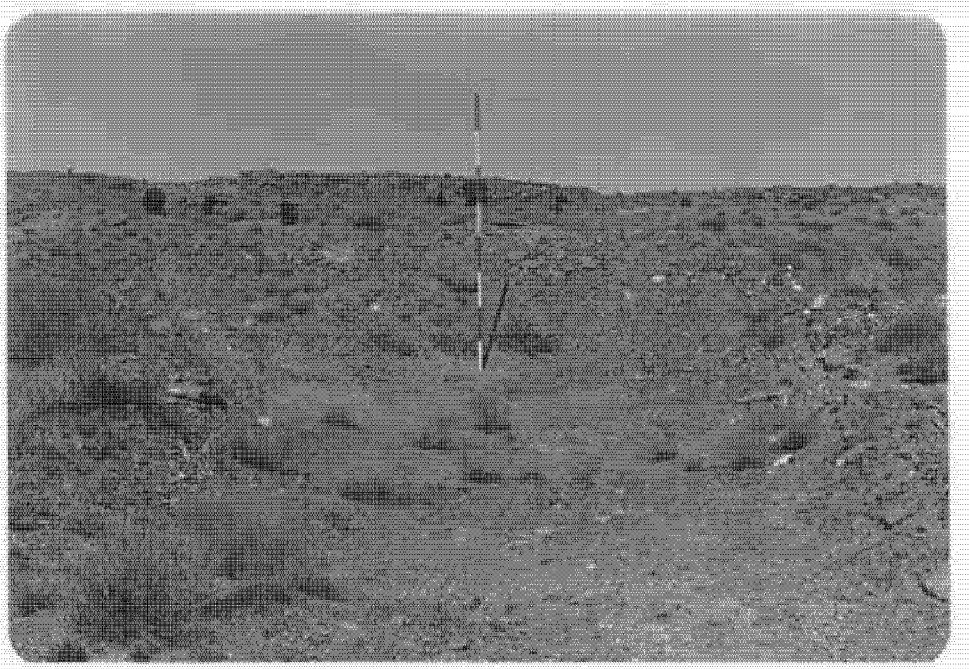


Photo (c) Looking west at one of smaller dozer cuts about 10' wide.

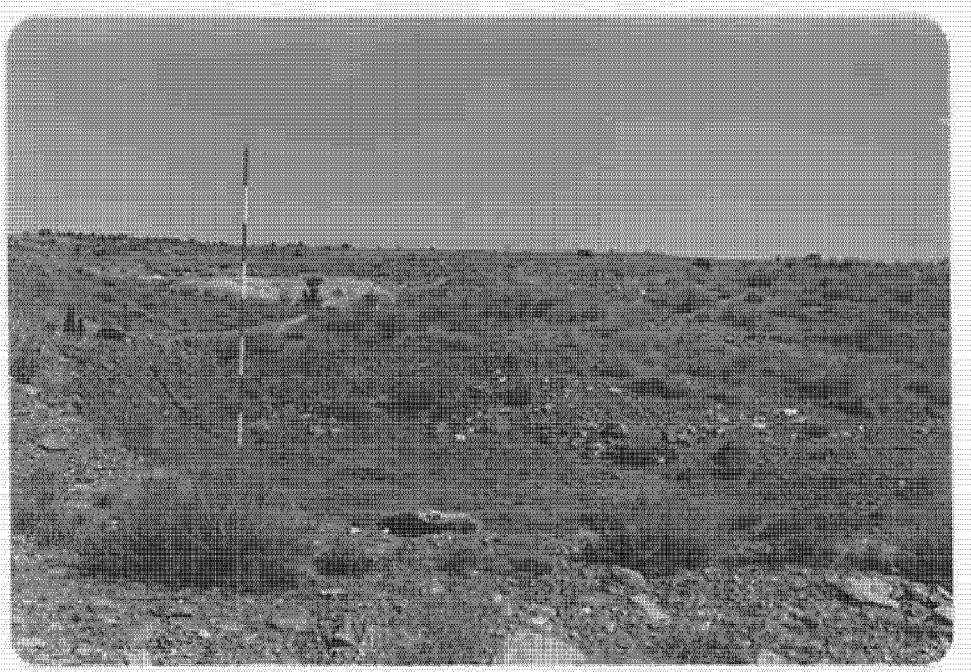


Photo (d) Looking north at small dozer cut with dump from cut in photo (c) visible in background.

SJ-151

Date visited Nov. 16, 1979

Mine name(s) Boyd Claims (Boyd deposit) County San Juan

Section N/2, 3 Twnsh. 30N R. 15W

Quadrangle sheet Waterflow 7 1/2'

Mining district sole occurrence (in Fruitland Coal Field)

Elevation 5,680'

Nearest city and/or dwellings N.M. Public Service Co., San Juan Generating Plant, 3 1/2 mi. south

Workings on the Boyd Claims consist of very small open pit work and some rim stripping and blasting of vertical cliffs in Fruitland fm. sandstone beds. The claims may be reached by leaving U.S. Highway 550 about 12 mi. west of Farmington and traveling north on the hard surfaced road 3 mi. to the New Mexico Public Service Co. San Juan Electrical Generating Plant. At this point a Public Service Co. escort will be required for the remaining 3 1/2 mi. trip northward, as the property is all leased and being actively mined to supply coal to the generating plant. The claims lie in sec. 3 about 1/4 mi south of the Ute Mountain Indian Reservation.

Uranium occurs at the base of a yellowish gray to dusky yellowish gray sandstone lens of the Fruitland fm. At places, such as the prospect pit near the east side of claim no. 10 (see claim map, Fig. 1), this lens contains small (0.5 to 1.5 cm diam.) limonite stained plant impressions. The base of the ore bearing sandstone is usually sharply defined. Underlying it is generally a 0.3' to 1.2' bed of friable sandstone; fine grained, greenish-gray, and argillaceous (Chenoweth, 1958). Photo (a) offers a view of the base of the ore zone in claim no. 10. Photo (b) gives a similar view of the ore zone at the main pit in claim no. 5. Scintillometer readings at these two sites ranged up to 2,500 cps, but no uranium mineralization is apparent. Chenoweth (1958) cited earlier work which indicated most of the uranium occurs as a micro-crystalline film on quartz grains. The main pit is a 50 to 60' long (E-W) rim stripped area which probably produced most of the 73.8 tons of ore reportedly shipped to the mill in Shiprock in 1955. The ore averaged 0.05% U_3O_8 and 0.05% V_2O_5, although one shipment reportedly went at 0.10% U_3O_8.

Photos (c) and (d) are views of small prospect pits in the southern portion of claim no. 5 where scintillometer readings of 2,000 cps or higher were recorded.

None of the workings constitute a hazard. The Public Service Land Co., a subsidiary of New Mexico Public Service Co. has recently staked claims in the area, perhaps to insure that their coal exploration and development work can progress as planned.

References:

(1) Chenoweth, W., 1958, The Boyd Uranium Deposit in the Fruitland Formation, San Juan Co. N.M., U.S. A.E.C. RME-107.

(over)

(2) Hilpert, L., 1969, Uranium Resources of N.W. New Mexico, U.S.G.S. Prof. paper 603, p. 52

(3) Field notes, 11/16/79

SJ-182

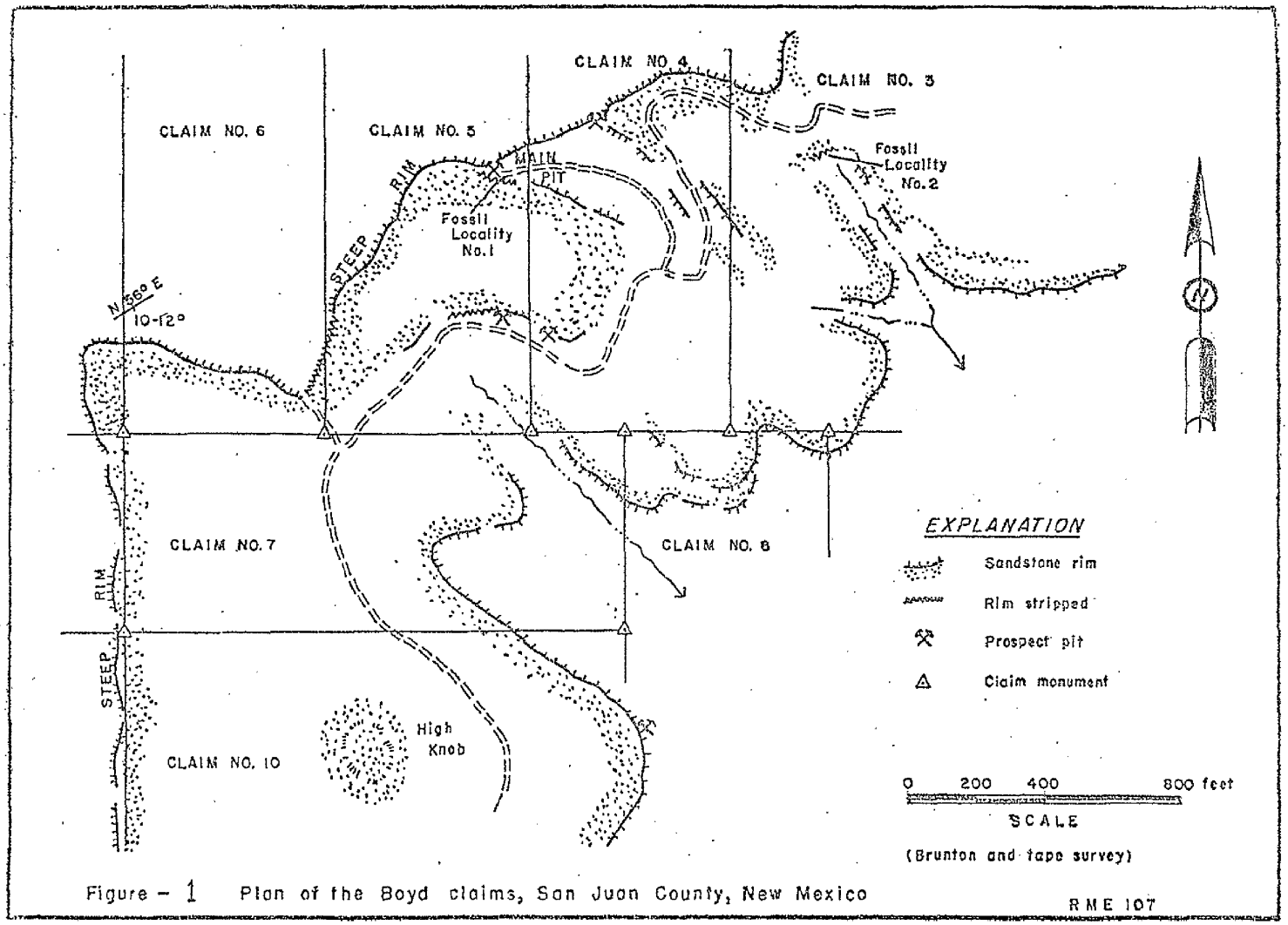


Figure – 1 Plan of the Boyd claims, San Juan County, New Mexico

RME 107

After Chenoweth (1958)

S-184

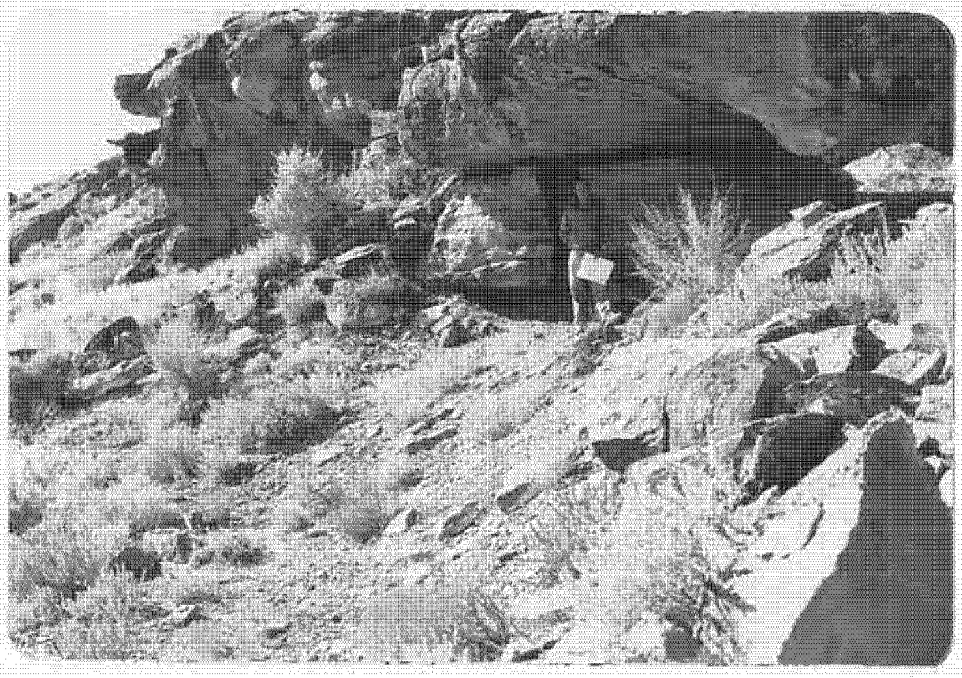


Photo (a) Looking SW at prospect pit, east end of claim no. 10 of Boyd Claims. Person in photo is standing near base of ore zone.

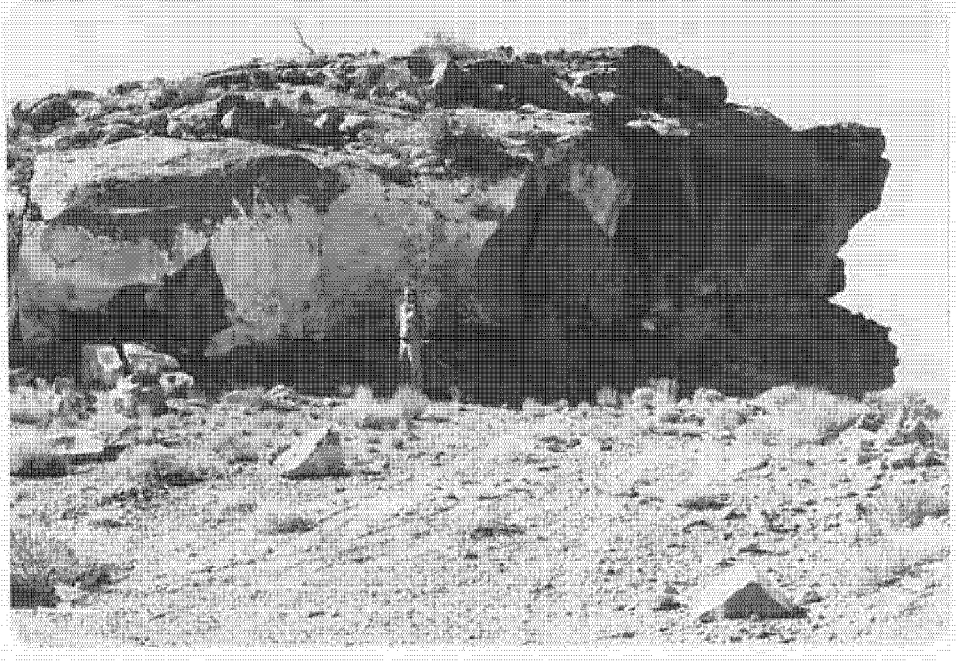


Photo (b) Looking SW at main pit in claim no. 5. Again note person standing at level of ore zone.

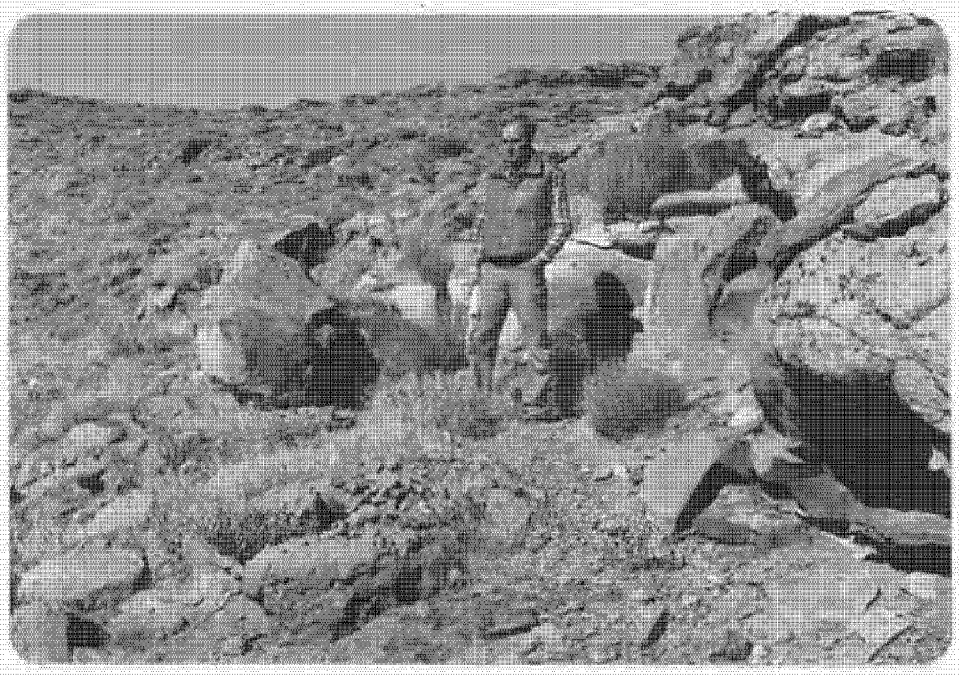


Photo (c) Small prospect pit in southern portion of claim no. 5, looking NW.

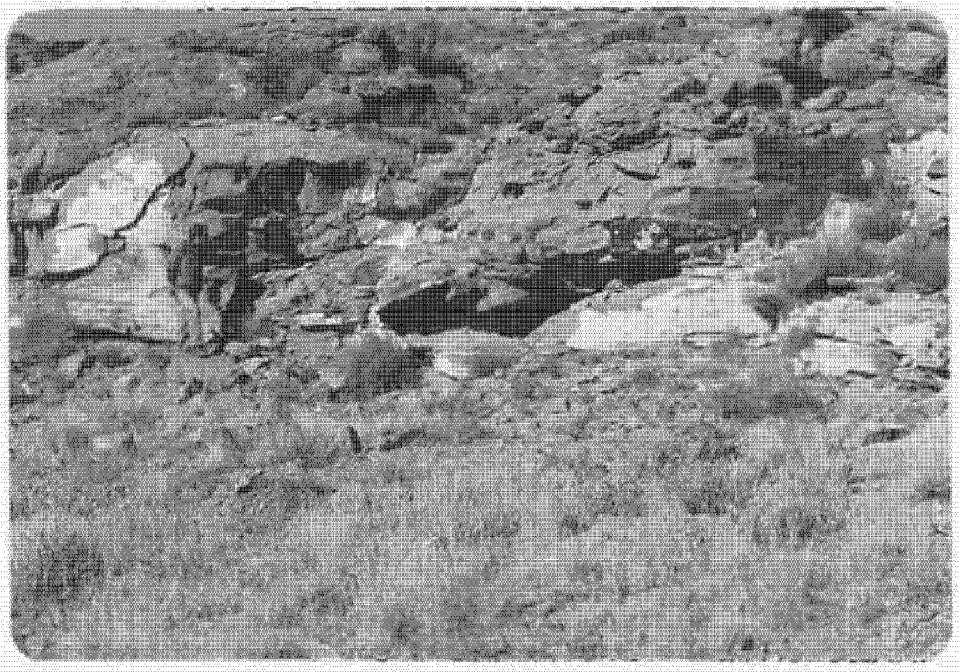


Photo (d) Small prospect pit in southern portion claim no. 5, showing evidence of blasting.

SAN MIGUEL COUNTY

Quad: El Porvenir 7½'

1. NM-135-2-1 Page 1

Sparks - Stone (Sparks Stone #1)

Quad: Honey Boy Ranch 7½'

1. NM-131-1-1 Page 2

High Peak(High Peak Claims)

Quad: Sabinoso 7½'

1. NM-139-2-1 Page 6

Sabinoso Uranium Coop. (Lujan Ranch) (Asco Mine)

2. NM-139-2-2 Page 10

Windy 9

3. NM-139-2-3 Page 12

Bish Claims

4. NM-139-2-4 Page 14

Verde (Hunt Oil Co. Sab)
*Unlocated on Sabinso Quad.

Date visited 9/20/1979

Mine name(s) Sparks-Stone (Sparks Stone #1) County San Miguel

Section 5 & 6 Twnsh. 16 N R. 14 E

Quadrangle sheet El Porvenir 7½'

Mining district N. A.

Elevation 8,000' (estimate)

Nearest city and/or dwellings Blue Haven Youth Camp; 3 mi E.

The present investigators were unable to reach the Sparks-Stone mine site because of locked gates, no trespassing signs, and unavailability of land owners. The nearest point reached was the Blue Haven Youth Camp which is 3 miles away.

A July 1960, Office Memorandum of the U.S. AEC stated that officials of that agency tried to reach the mine during the month of July, but ran into blocked roads and signs stating "Road closed by court order." The memorandum further stated that reports made earier by an agency certification engineer indicated previous road problems at "distances of 3 or more miles from the property." The memorandum concluded by stating, "No reserve is assigned the property as only 4 tons of .06% U_3O_8 and 13 tons of .13% U_3O_8 were shipped from it. Controller lost interest after the second ore shipment in mid-1956."

AEC records show the workings consist of a small open pit about 20' x 50', and 5' deep (Wm. Chenoweth, written communication, Nov. 1979).

References

1. U.S. AEC Office Memorandum, July 11, 1960

2. Wm. Chenoweth, U.S. Dept. of Energy, written communication, Nov. 1979

SM

Date visited 10/20/79

Mine name(s) High Peak (High Peak Claims) County San Miguel

Section (Unsurveyed) NE¼ 30 Twnsh. 17 N R. 13 E

Quadrangle sheet Honey Boy Ranch

Mining district Willow Creek

Elevation 9160'

Nearest city and/or dwellings 1½ mile NW of Emerson Ranch; 9 air miles NE of Pec

The High Peak Mine is located about 300' west of the Rito Atascoso which drains southward into the Rito Manzanares. The claim, which was never patented, lies within the Santa Fe National Forest about 1½ miles NW of The Emerson Ranch.

At present the workings on The High Peak claim consist of 100' long open cut or trench which apparently had been an adit at one time, (A.E.C. - P.R.R.). The Honey Boy quadrangle, printed in 1961, shows an adit symbol at the mine site. A short adit about 15' deep remains at the west end of the trench, see photo (a); the trench trends N 57° W.

The dump extends eastward from the trench for some 50'-75'; ranges up to 100' wide in a N-S direction, and has a maximum height of 25'. A small, shallow depression between the pit and the west edge of the dump held some water but it is apparently a seasonal pond and represents no hazard. No scintillometer readings are available for this site.

The deposit consists of pegmatitic stringers in Precambrian granite according to Griggs and Henderson, 1951, (see Photo b). A somewhat later report by Romslo, 1954 (DMEA-3207) stated that:

> "The Mora (High Peak) deposit contains small amounts of monazite sporadically distributed in a pegmatite dike that apparently contains little or no uranium ore, high grade mica, or other marketable products."

The same report goes on to quote an AEC letter of May 20, 1954 sent to the U.S.G.S. explaining that

> "Because the monazite occurs as scattered, small segrations within the pegmatite, tonnage is apparently too low to warrant exploitation. Also the uranium content of the monazite is much too low to make ore."

Total production through 1954 was reported as a few hundred lbs. of monazite ore taken from float rock and 1.25 tons of hand sorted ore from 2 shallow trenches. Obviously the long pit and short adit photographed at the site during the present investigation were developed after 1954, but additional production data is unavailable.

No monazite was recognized in the pegmatite dikes by the present investigators.

turn

SM-2

A map of the High Peak claim area from Romslo, 1954 is included as figure 1.

Reference: (1) Griggs, R. L., and Henderson, G. E., 1951, Geology and Groundwater Resources of San Miguel County, New Mexico; N. M. Bur. of Mines, Ground Water Report 2.
(2) Romslo, T., 1954, Mora Monazite Company High Peak Monazite claim, Willow Creek Mining District, San Miguel Co., N. Mex.; AEC DMEA-3207.
(3) U.S. A.E.C., 1956, Preliminary Reconnaissance Report (PRR) File No. ASO-132; in RME-160.

SM-3

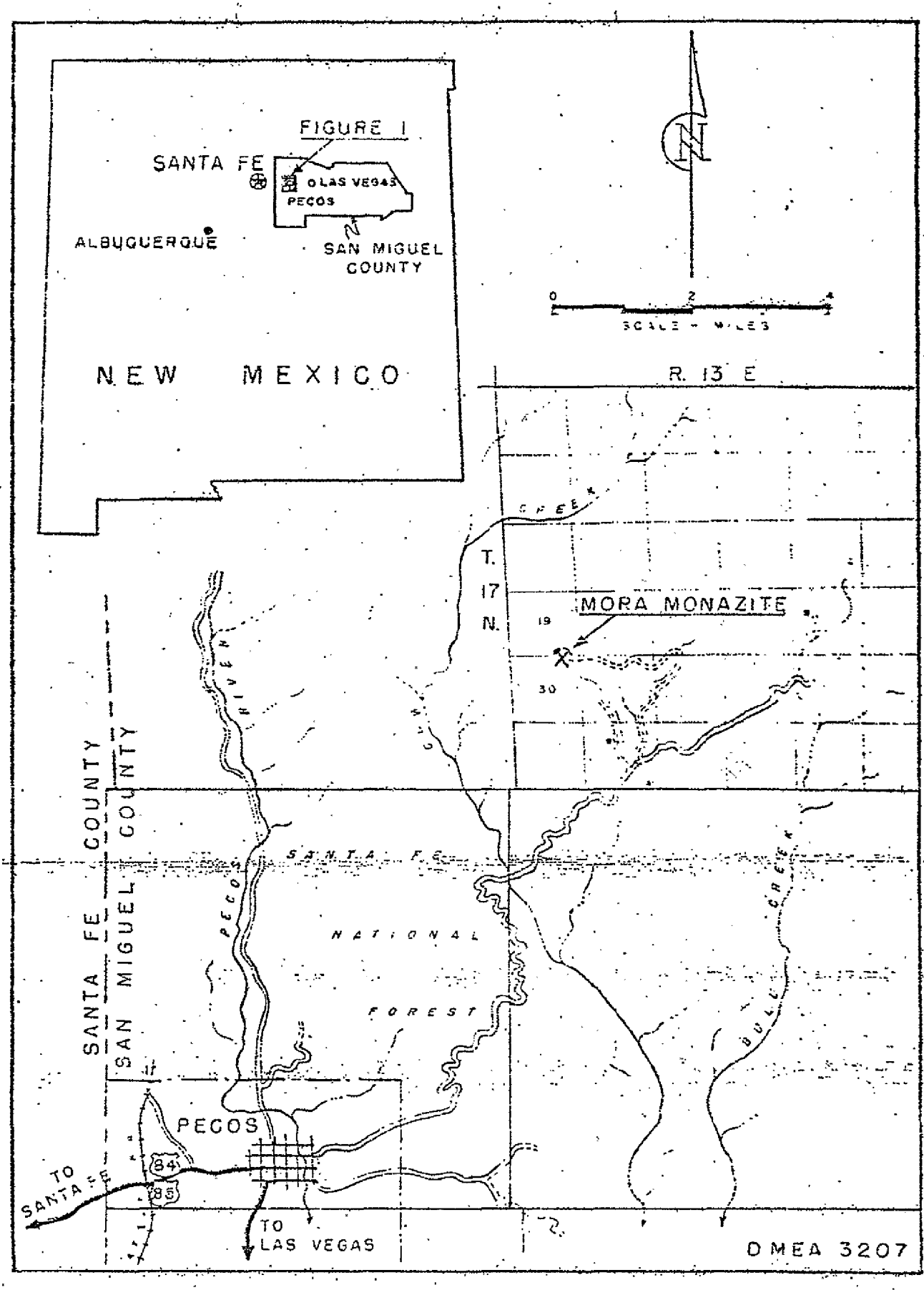


FIGURE 1. - LOCATION MAP - MORA MONAZITE CO.
HIGH PEAK CLAIM SAN MIGUEL COUNTY, NEW MEXICO

Sm 4

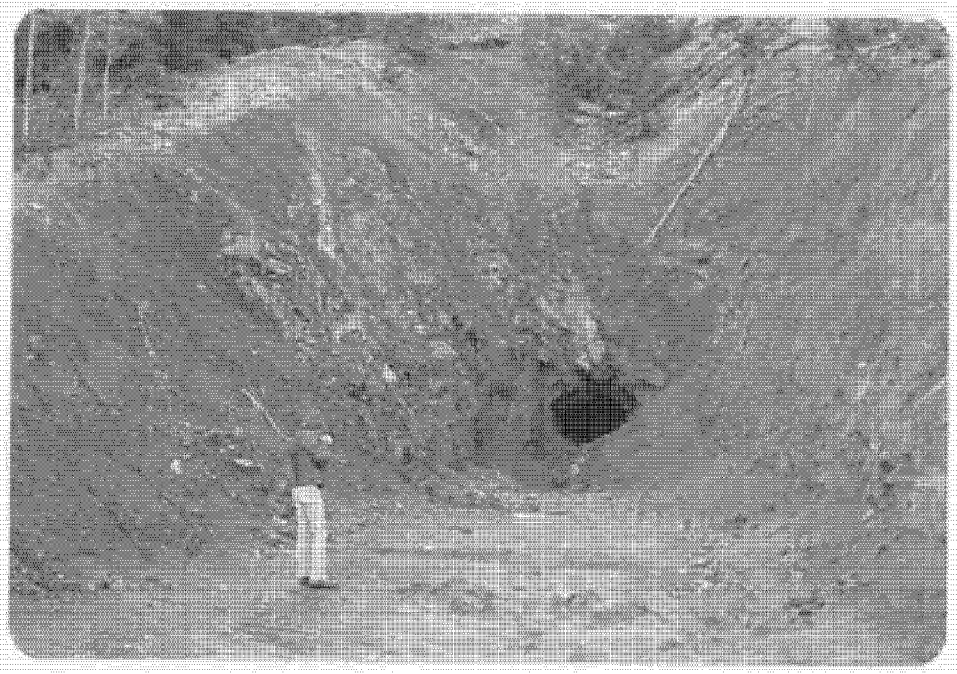


Photo (a) High Peak Pit.

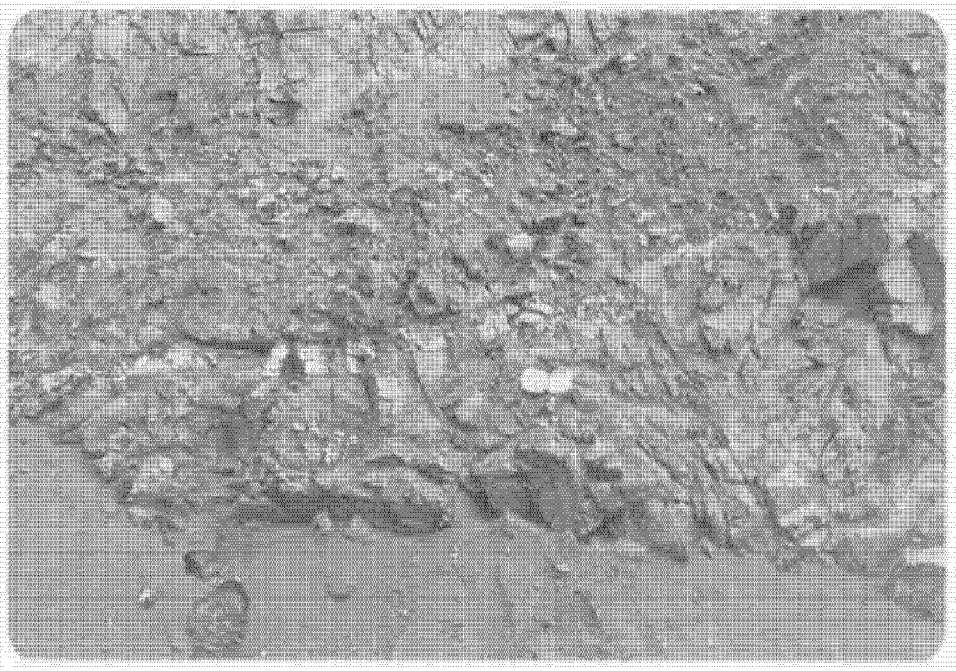


Photo (b) Close up of pegmatite veins in Pe granite; note Brunton compass for scale.

Date visited 9/18/79

Mine name(s) Sabinoso Uranium Corp. (Lujan Ranch) (Asco Mine) County San Miguel

Section SE¼ 8 Twnsh. 17 N R. 24 E

Quadrangle sheet Sabinoso

Mining district Sabinoso

Elevation 4840'

Nearest city and/or dwellings 7 mi. north of Sabinoso Village, ½ mile SE of nearest farm.

The Sabinoso Uranium Corp. workings are located on sandstone cliffs on the east bank of the Canadian River. The small adit is approximately 250' up the wall of the canyon. Access is by dirt road .7 miles north from the Sabinoso Church.

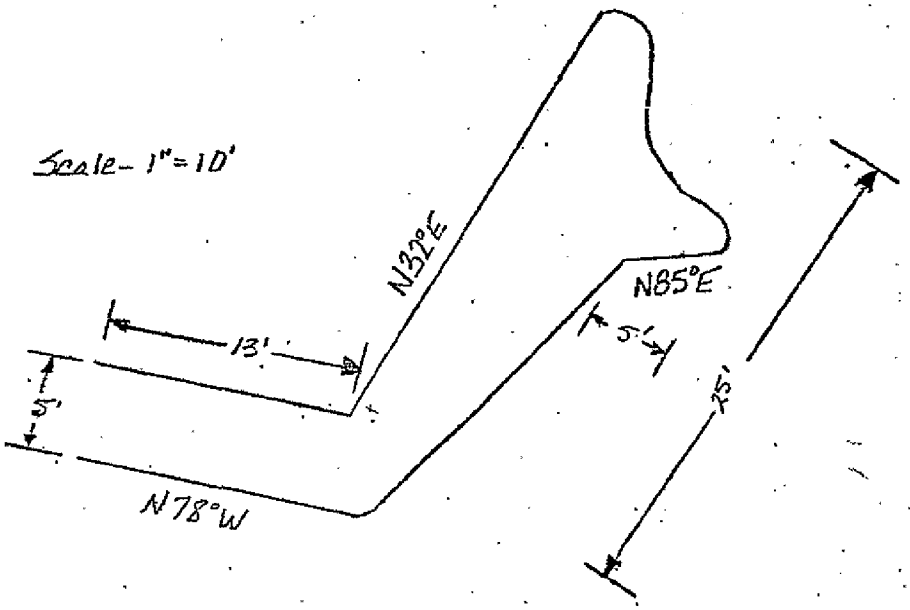
Workings consist of a small adit (see diagram), and a blasted face (photo a). The face cut is about 75' north of the adit. It is 30' long in a north-south direction, and 25' high. Maximum depth on the cut is 3-5'. The adit entrance is 6' high and 5' wide, and trends N 78° W for the first 13'. At this point it jogs left for 25'; and the roof is lowered 1' to make the clearance 5'.

The adit and cut are in the middle unit of the Chinle Sandstone (Finch, 1972). The stratigraphic sequence of the open cut is 1' of basal greenish gray mudstone or siltstone, 1' of red/green mudstone, shale, and sandstone, 5' of red conglomeratic sandstone lenses, capped by 18' of massive, fine to medium grained sandstone, which locally contains micaceous zones. The open cut was barren of visible mineralization, the adit contained pockets of carbonized plant debris (photo c), which may contain uranium and pyrite?

References: (1) Finch, Warren I., 1972, Uranium in Eastern New Mexico, U.S.G.S., open-file rept., 19 p.
(2) Griggs, R. L., 1955, Tucumcari-Sabinosa area in Geologic investigations of radioactive deposits, semi-annual progress report, June 1 to November 30, 1955, U.S.G.S. TEI-590, p. 191-195.
(3) Baltz, E. H., Jr., 1955, A reconnaissance for uranium in carbonaceous rocks in southwestern Colorado and parts of New Mexico: U.S.G.S. TEM-91
(4) New Mexico State Mine Inspectors Office

III-6

Plan MAP - Sabinaso Uranium Corporation



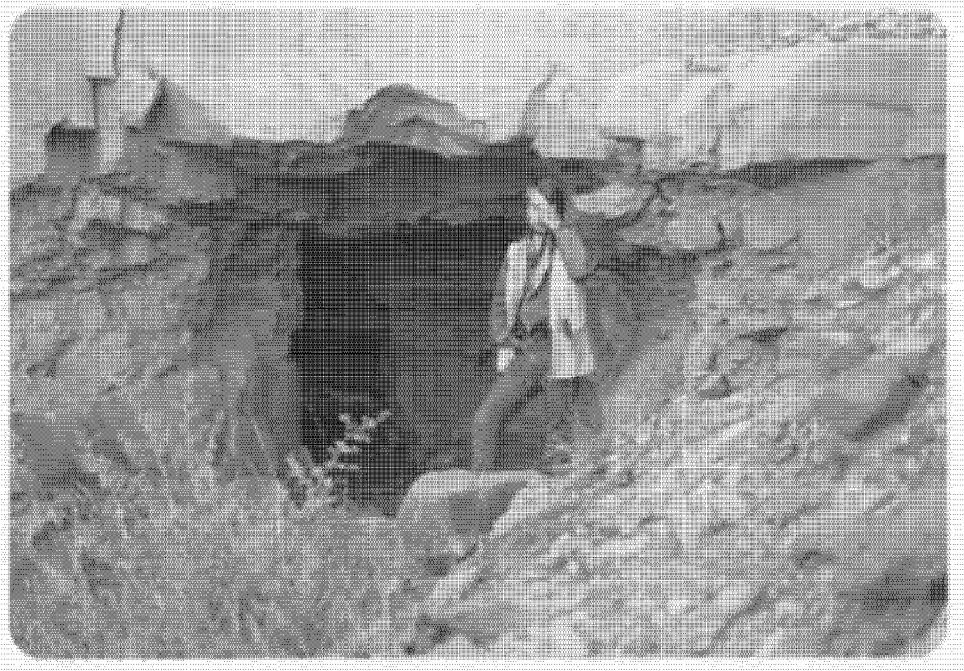


Photo (a) Face Cut-Sabinoso Ur. Corp.

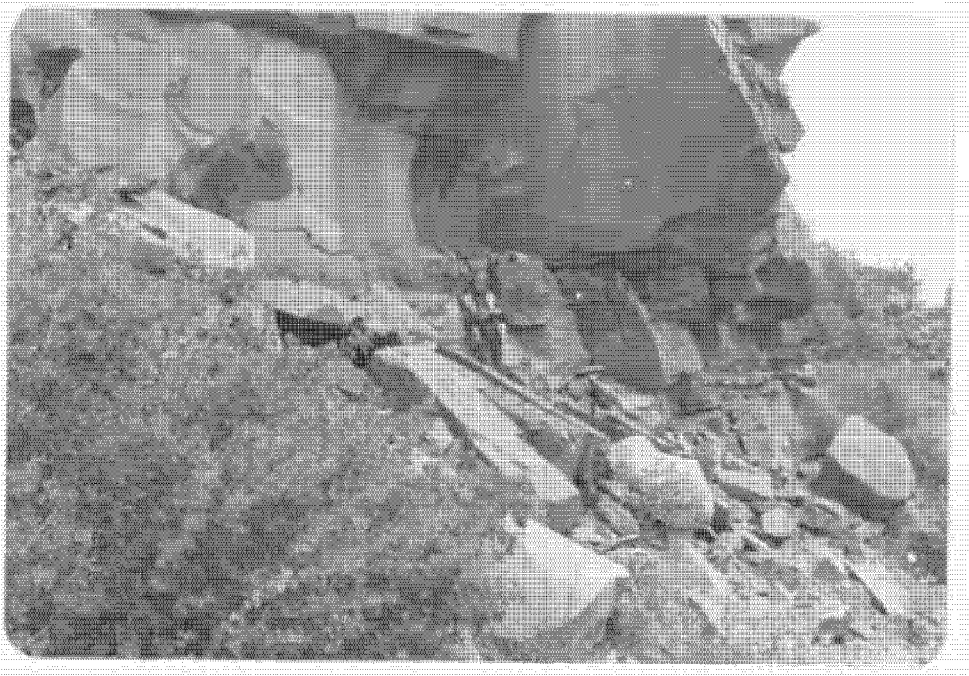


Photo (b) Adit entrance-Sabinoso Uran. Corp.

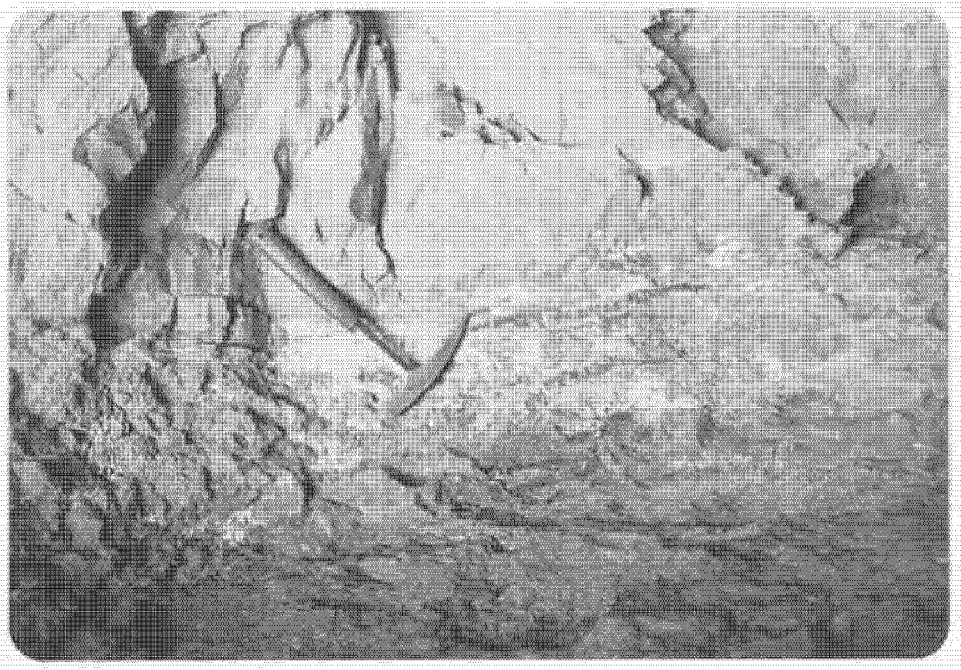


Photo (c) Carbonaceous trash zone-inside Sabinoso U. Corp. adit.

Date visited 9/18/79

Mine name(s) Windy 9 County San Miguel

Section SE¼ 14 Twnsh. 17 N R. 23 E

Quadrangle sheet Sabinoso

Mining district Sabinoso

Elevation 4920'

Nearest city and/or dwellings 2 mi. NE of Lewis Ranch; 3 mi. due west of Sabinoso

The Windy #9 is located 1/4 mile north of Canon Largo, 200' off the creek bed floor, on a series of low hills. Canon Largo drains eastward into the Canadian River, but there is no apparent danger of seepage of tailings into the river.

The bulldozering (photo a) covers a total of 3,600 linear feet (A.E.C., P.R.R.), and bedrock is exposed in only a few cuts. For the most part, only the soil cover was disturbed, and bedrock was not encountered. No scintillometer readings were available to determine anomalies in the lower, soil covered area.

The adit (photo b), is timbered by 6 x 8" cedar posts with poles on top at the entrance. The entrance is 6' wide, 5½' high. Some filling of the floor has occurred at the entrance. The adit trends N 20° W for 25' where it bends to the right. No dump of appreciable size was noted.

The adit is in the middle unit of the Chinle Formation. Ore seems to be associated with a gray carbonaceous trash zone. Trial shipments totaling 80 tons were made from the Windy 9, Good Luck 1, and Little Rattler (Finch, 1972). No visible uranium minerals.

Reference: (1) Finch, W. F,, 1972, Uranium in Eastern New Mexico, U.S.G.S. open file rept.
(2) State Mine Insp.
(3) U.S. A.E.C. Uranium Mine Records

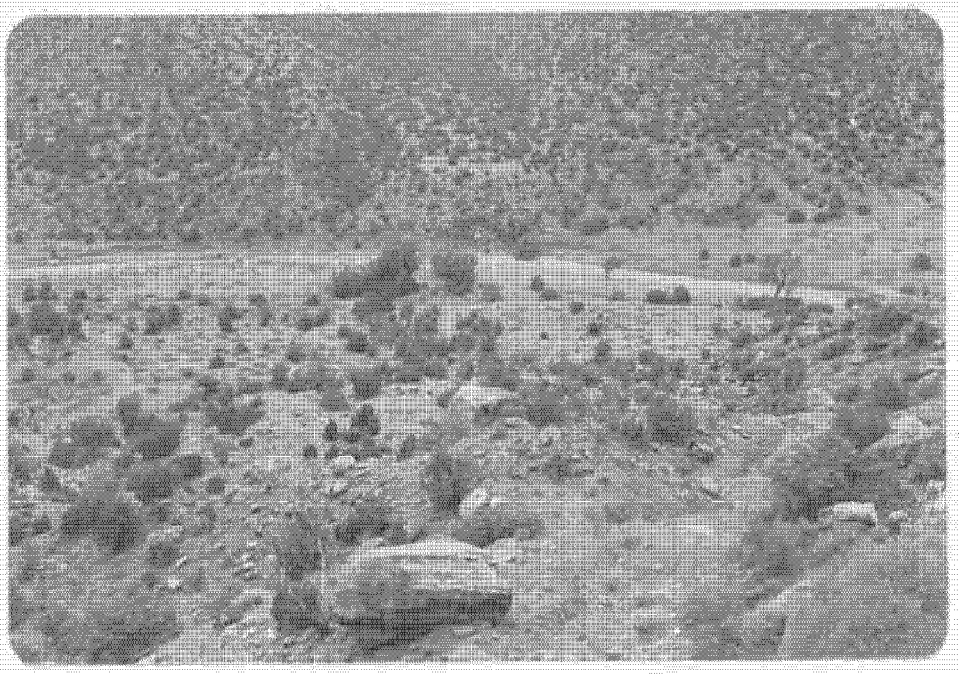


Photo (a) Bulldozer activity-Canon Largo in background.

Photo (b) Adit entrance0Windy #9.

Sm-11

Date visited 9/19/79

Mine name(s) Bish Claims County San Miguel

Section NE¼ NE¼ 31 Twnsh. 17 N R. 24 E

Quadrangle sheet Sabinoso

Mining district Sabinoso

Elevation 4950'

Nearest city and/or dwellings 2 mi. SW of Sabinoso

The Bish Claims are located on the far southwestern corner of a NE-SW trending ridge, with Cerro del Miguel Antonio to the NE, and Canon Sabinoso ½ mile over the ridge to the NW.

Evidence of an adit was found at the site, ore piles, timber, etc., and the State Mine Inspector makes reference to a tunnel, however, the entrance may be caved, as after an extensive search no adit was found*. There was evidence of extensive drilling activity, and 6 levels of drill roads were found (photos a and b).

According to Finch, (1972), the Bish #2 Mine yielded 30 tons of ore, averaging 0.10% U_3O_8 and 0.40% V_2O_5.

Host rock is the middle member of the Chinle, which locally is a sandstone, limestone-pebble conglomerate (Finch, 1972), that contains carbonized plant remains.

Reference: (1) Finch, 1972, Uranium in Eastern New Mexico, U.S.G.S., open-file report.
(2) U.S. A.E.C. Uranium Mine Records
(3) State Mine Inspector

* A report later obtained, courtesy of Wm. Chenoweth, by I. T. Fisk, a field engineer for the A.E.C., states that the adit was 75 feet in length. Mr. Fisk made his field check in August, 1960, and he states the portal was partly caved and the mine flooded 30' from the portal at the time of his visit.

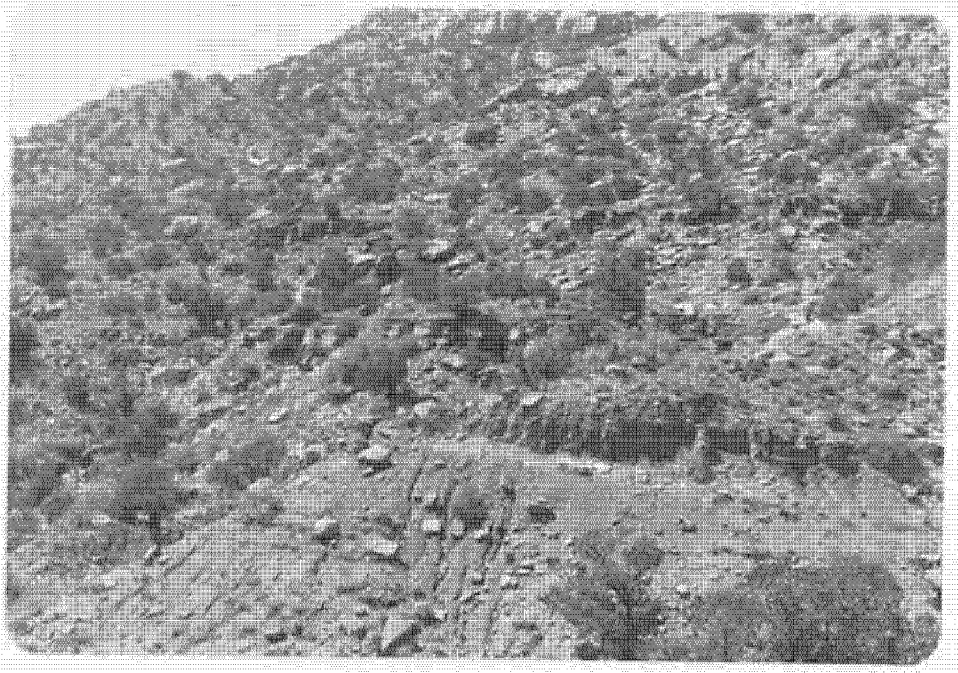


Photo (a) Drill roads in the Bish Claims.

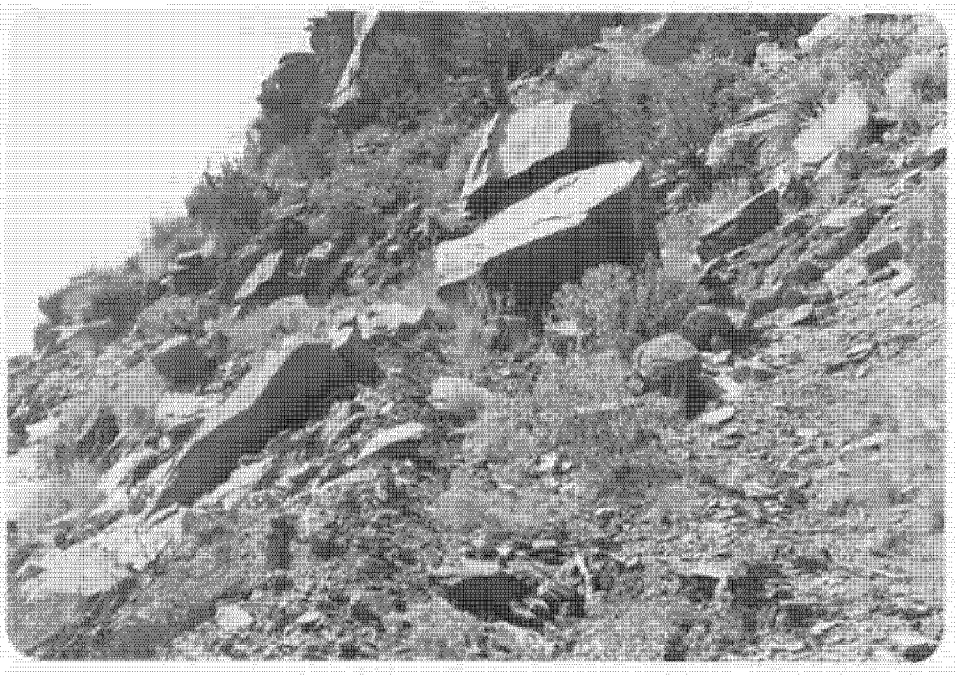


Photo (b) Close up of impassable drill road on the Bish Claims.

SM-13

Date Visited 9/19/79

Mine name(s) Verde (Hunt Oil Co. Sab County San Miguel

Section W½ 29 Twnsh. 17 N R. 24 E

Quadrangle Sheet Sabinoso 7½'

Mining district Sabinoso

Elevation 4780-4850'

Nearest City and/or dwelling Sabinoso 2 mi. NE

The Verde claims are located on the NW side of a NE-SW trending ridge leading to Cerro del Miguel Antonio on the NE. Canyon Sabinoso is 1/10 of a mile to the west.

No clear evidence of a mine exists. Mr. Martinez, a local rancher, indicated that there were some workings along the SE wall of Sabinoso Canyon in Sec. 29. During the field check evidence was found of an ore stockpile in the SE¼ of 29, but other than old roads, no evidence of disturbed ground was noted. The host rock was probably Chinle sandstone.

References:
(1) State Mine Inspectors Office.
(2) Finch, 1972, Uranium in Eastern New Mexico, U.S.G.S. open file report.
(3) Field notes, 9/19/79.

SANTA FE COUNTY

Date visited 9/13/79

Mine name(s) Marion County Santa Fe

Section N½ 7 Twnsh. 20 N R. 10 E

Quadrangle sheet Cundiyo 7½'

Mining district N.A.

Elevation 6610'

Nearest city and/or dwellings 1000' NW of cabin on Northern edge of Santa Cruz Reservoir. 1 mi. SE of Sanctuario Retreat.

The Marion Prospect is located on the southeast edge of a spur overlooking Santa Cruz Reservoir. The prospect is approximately 1200 ft. N of the dam, and 1500' west of The Santa Cruz River.

The Marion consists of two bulldozer cuts and an ore chute/access road (photos a & b). The bulldozer cuts are less than 2' deep. One trends west, is 40' long and 15' wide. The second trends NW, is 30' long 10-15' wide. The combination ore chute access road is 10' wide and 40' long in the bulldozed area. Total disturbed area is 60' x 60'.

Host rocks are granite gneiss and biotite-microcline granite members of the Embudo Granite (Miller, et. al., 1963). No visible uranium minerals.

References: (1) Miller, J. P., Montgomery, A., and Sutherland, P. K., 1963, Geology of Part of the Southern Sangre de Cristo Mtns., New Mex., N. M. Bur. Mines and Mineral Resources, mem. 11.
(2) New Mexico State Mine Inspectors Office, inactive uranium mine file.
(3) U.S. AEC RME-160.

SF-1

Photo (a) Bulldozer cut, Marion Prospect.

Photo (b) Access Road - ore chute, Marion Prospect.

Date Visited 9/14/80

Mine name(s) Rodgers Claims (Becky) (San Jose) County Santa Fe

Section 17, 20, (29-San Jose) Twnsh. 20 N R. 9

Quadrangle Sheet Espanola 7½'

Mining district N.A.

Elevation 5800'

Nearest City and/or dwelling Sombrillo & Rancho Valle (Unincorporated) 2 mi. N; additional scattered dwellings along US 64 & 84.

The Rodgers claims run north-south along two tributaries of Arroyo Seco. U.S. interstate 64, 84,285 running north south is approximately ½ mile due west of the claims.

Workings on the claims consist of several small bulldozer pits, which now serve as catch basins for water promoting vegetation growth (see photos a & b). The pits are supposedly spread out over three sections, however, this search revealed workings only in the S½ of Sec. 17 and the N½ of Sec. 20. Dimensions of a typical pit are 15' x 15' x 2' deep. No scintillometer readings are available. Anomalous areas were apparently detected using airborne radiometrics (Hilpert, 1969) and claims staked accordingly.

The dozer cuts are in the Santa Fe group, consisting of slightly consolidated sandstones, siltstones, and mudstones. No uranium minerals were visible during the field visit, but according to Hilpert (1969), carnotite, schroeckingerite, and meta-autonite coal fractures in a small pit in the NW¼ of Sec. 29, and a grab sample yielded 0.27% U_3O_8. Another grab sample in the SW¼ of 17 yielded U_3O_8 values of 0.03%

Photo (c) shows an additional prospecting pit on the north bank of a small drainage line. In the background may be seen some of the dwellings that characterize scattered development along U.S. route 64 & 84.

References:
(1) Chenoweth, William, 1979, Uranium in The Santa Fe Area in New Mexico Geol. Soc. 30th Field Conference Guide book, Santa Fe County, p.263.
(2) Collins, G. E., and Freeland, R. G., 1956, Airborne and Ground Reconnaissance in the Espanola area, Santa Fe County, New Mexico, U.S. AEC RME-1075.
(3) Hilpert, L., 1969, Uranium Resources of NW New Mex; USGS Prof. Paper 603.
(4) N. Mex. State Mine Inspector.

SF 2

Photo (a) Small bulldozer cut-Rodgers claims.

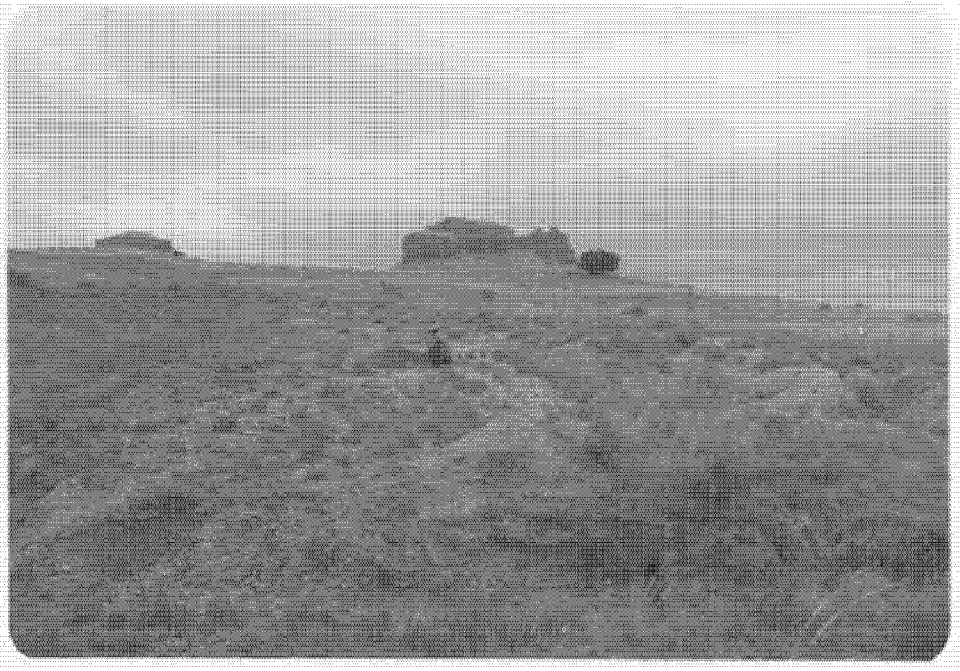


Photo (b) Rodgers claims, Santa Fe Fm., looking north.

Photo (c) Rodgers Claims, looking NW; note claim marker in immediate foreground. Locale is near Sec. 17/20 line.

Date Visited 9/21/79

Mine name(s) La Bajada (Lone Star) County Santa Fe

Section NW¼ 9 W. Twnsh. 15 N R. 7 E

Quadrangle Sheet Tetilla Peak

Mining district La Bajada

Elevation 5580'

Nearest City and/or dwelling 4 miles west of La Cienega

The La Bajada is located on the floodplain of the Santa Fe River, the river having been diverted slightly to the south which enabled mining operations to proceed.

Workings consist of an open pit and shaft. The open pit (photo a) is 125' (N-S) x 425' (E-W), and filled with water. The cut on the north side of the pit is 50' high (photo b). The shaft is underwater and is located at the NW side of the pit. The shaft is vertical and was worked for copper in the early 1920's (Hilpert, 1969).

The shaft is reportedly 170' deep, with drifts and crosscuts at 140 and 170'. The mine was developed by La Bajada Mining Co. in the 1920's and produced 8 tons of ore containing 24 oz. silver and 2423 pounds of copper. Much later Lone Star Mining and Development Corp. acquired the property and a small shipment of uranium ore was made in 1957. According to the State Mine Inspectors Minerals Yearbook, $16,942 worth or ore was shipped in 1963, and 9,708 was shipped in 1964. Development work was reported in 1965.

In addition to the above workings, there is a series of drill and exploration roads across the river to the south of the pit (photo c). These represent no hazard. A series of ore dumps and waste piles sit to the west of the pit and encompass an area of 150' E-W x 100' N-S. No scintillometer readings were available at the time of the field check.

The host rock at La Bajada is the Oligocene Espinaso Formation, which is a tuff-breccia. Mineralization is confined mainly to a fault which cuts the Espinaso; (see sketch on page 8). The rocks have been hydrothermally altered and injected with sulfides of copper and iron. An interpretation of the genesis of the deposit is given in Vassilou & Kerr, 1972. No uranium minerals have been identified in what is called urano-organic matter.

A water sample from the pit was obtained for chemical analysis. Tests showed 23 ppm SO_4 and .25 ppm total Fe: A complete analysis was not carried out, however, because local surface water quality would be so overwhelmed by Santa Fe River water which carries the sewage effluent from the city of Santa Fe primary treatment plant.

(turn)

SF-6

References: (1) Chenoweth, William, 1979, Uranium in the Santa Fe Area, in New Mexico Geol. Soc. 30th Field Conference Guidebook, Santa Fe Country; p. 261.
(2) Elston, W. E., 1967, Summary of the Mineral Res. of Bernalillo, Sandoval, and Santa Fe Countries, New Mex., N. M. Bur. Mines Bull. 81., pp. 36-37.
(3) Haji-Vassilou, A., and Kerr, Paul F., 1972, Uranium-organic matter association at La Bajada, New Mex., Econ. Geol. Vol. 67, pp. 41-54.
(4) Hilpert, Lowell S., 1969, Uranium Res. of NW New Mex., USGS Prof. Paper 603, 66 p.
(5) Lustog, L. K., 1957, The Mineralogy and paragenesis of the Lone Star Deposit, Santa Fe County, New Mexico, unpub. masters thesis, Univ. N. Mex., 55p., 13 figs.
(6) State Mine Inspector.

SF-7

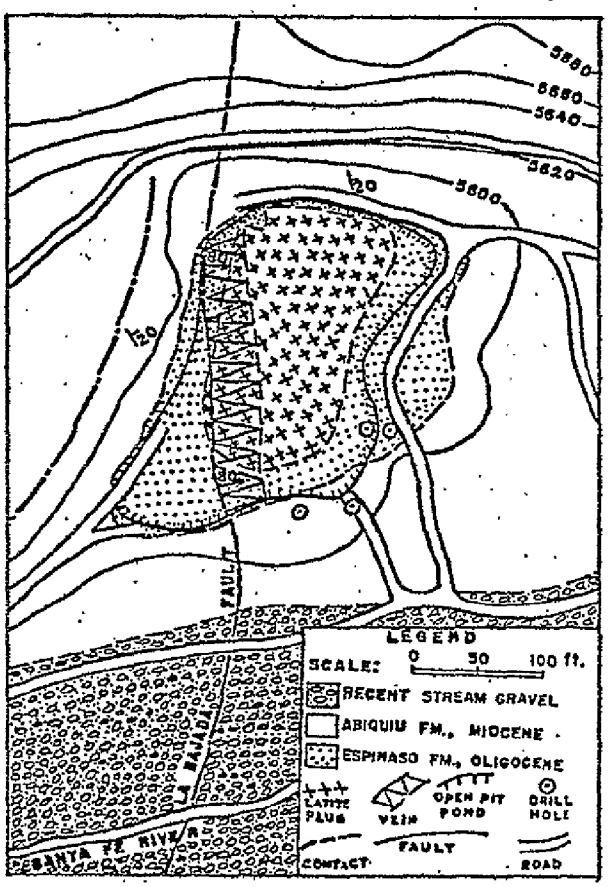


FIG. 3. General geology of La Bajada mine and vicinity.

From Vassilou and Kerr, 1972. Econ Geol. V67, pp41-54.

Photo (a) La Bajada Open Pit.

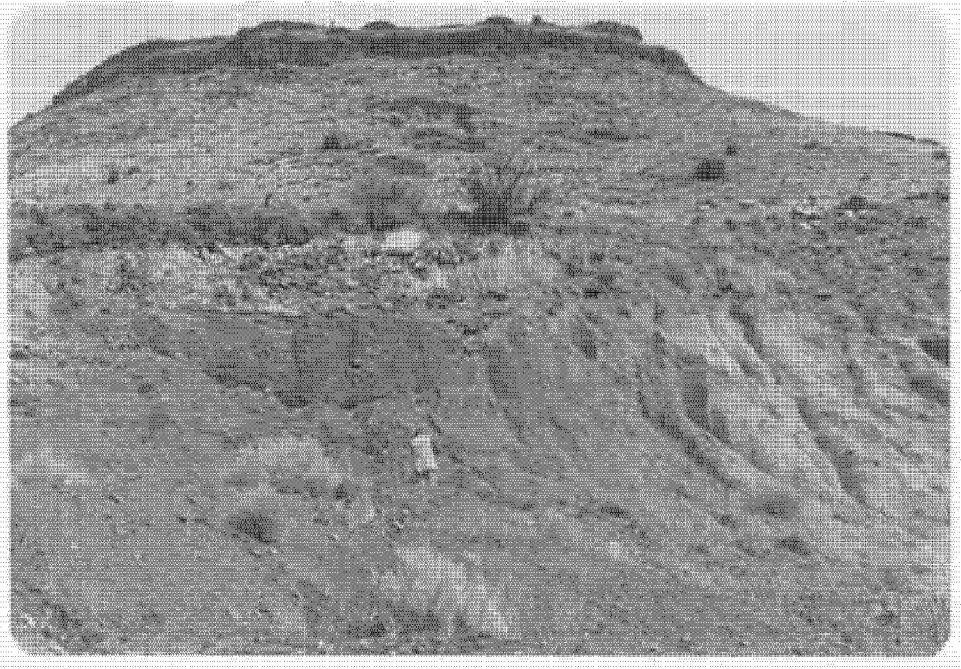


Photo (b) Cut at north end of La Bajada Pit.

SF-7

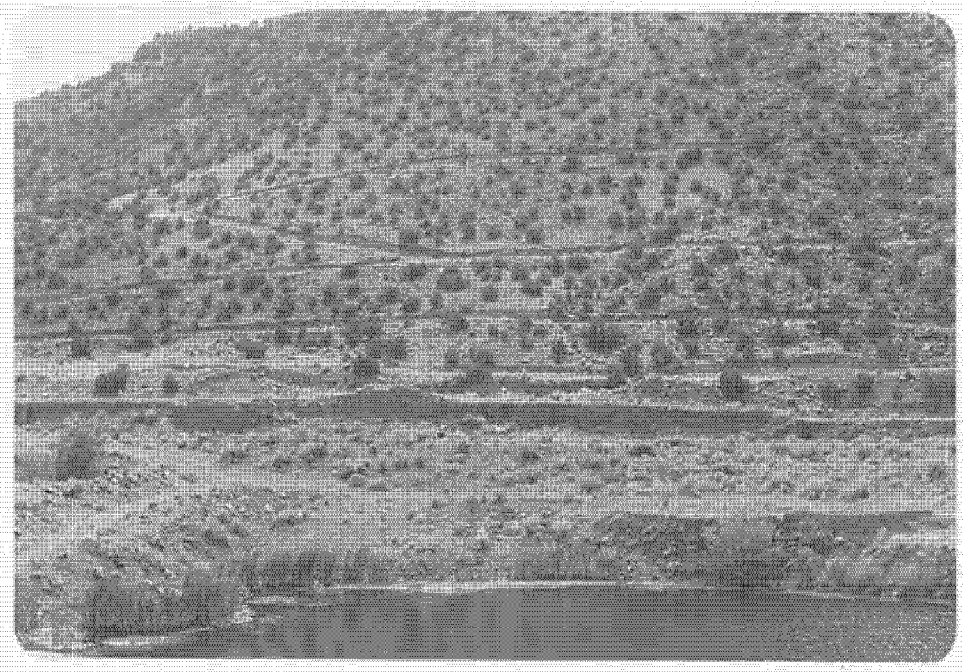


Photo (c) Drill roads on south side of Santa Fe Canyon.

SF-10

SIERRA COUNTY

Quad: Thumb Tank Peak 7½'

1. NM-366-1-1 Page 15

Red Tiger (Bobby Johnson)

Quad: Upham 15'

1. NM-392-0-1 Page 16

Paran (Paran Claim)

Date visited 5/20/80

Mine name(s) Red Rock (Red Rock Claim 1) County Sierra

Section 28 & 33 Twnsh. 16 S R. 4 W

Quadrangle sheet Caballo

Mining district Pittsburg

Elevation 4,990'

Nearest city and/or dwellings Caballo Dam (2½ mi. to the NW)

The Red Rock Claims are listed as being in both sec. 28 and 33 (RME-160). The workings described herein are in sec. 33. They may be reached by taking old highway no. 85 south of Truth or Consequences, crossing the Rio Grande at Caballo Dam, and proceeding south on the east river road for about 1½ miles to where the road ascends from river level to higher terrace level. At this point take side road to east towards the mountains to the mine site.

The workings consist of a NE trending, 90' long trench cut at the center of a larger oval shaped prospected area, (see photos a & b). Trench is 6' to 7' wide, and is up to 12' deep at the terminus. Trench followed a hematite stained vertical fracture in chloritic rich coarse grained quartz monzonite. Scintillometer readings up to 1,700 cps were recorded at the end face, but no uranium mineralization is visible. Staatz, 1965, reported that "four bodies have at least some parts in which the radioactivity value is greater than 40 x background".

Workings represent little if any hazard. Mine was registered with State Mine Inspector's Office in the mid 1950's by Badger Mining Co., Inc.

Additional prospecting pits and perhaps small workings may be seen in sec 33 and in adjacent sec. 4, and it is possible some were overlooked.

References: (1) U.S. AEC RME-160, 1970, Preliminary REconnaissance for uranium in New Mexico, 1950-1958; GJO/AEC; p. 189.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Staatz, Mortimer H., et. al., 1965, Thorium Bearing Microcline Rich Rocks in the Southern Caballo Mountains, Sierra County, New Mexico, USGS prof. paper 525-D.
(4) Field notes, 5/20/80.

SI-1

Photo (a) Looking northeastward into 90' long trench cut into chlorite rich granitic rock; trench is in center of larger oval shaped stripped area.

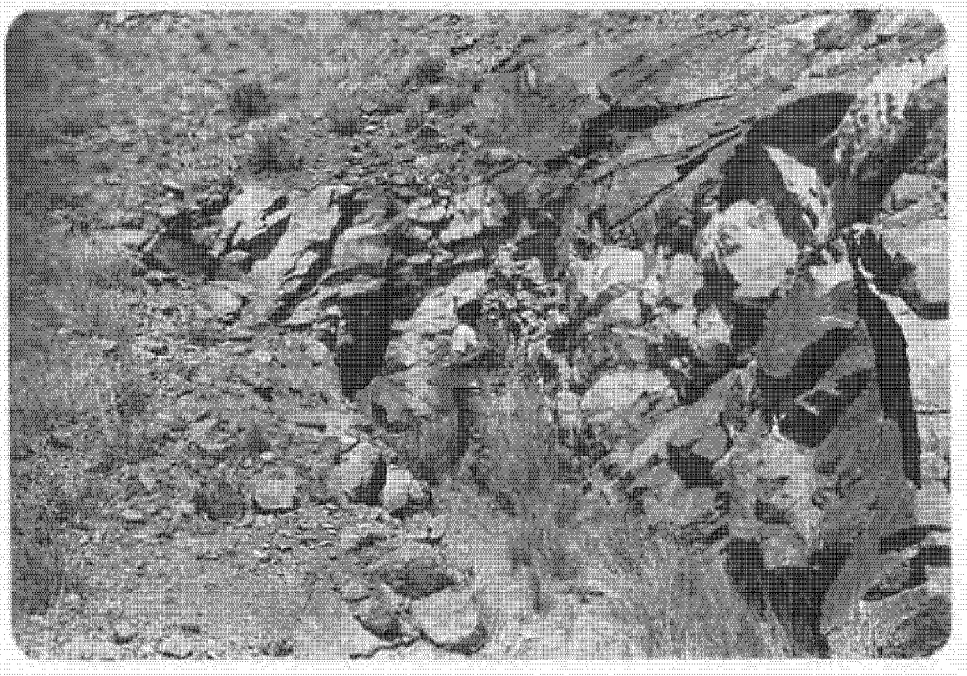


Photo (b) Close-up of trench shown above in photo (a). Hematite stained vertical fracture is visible just to left of person in photo.

Date visited 5/21/80

Mine name(s) Trujillo Lease (Chise) County Sierra

Section 18 Twnsh. 12 S R. 7 W

Quadrangle sheet Chise 7½'

Mining district -

Elevation 5,760'

Nearest city and/or dwellings Chise (¼ mi. NW)

Some very minor prospecting was done in sec. 18 in the mid 1950's. The area is about ¼ mile east and ¼ mile south of Chise, which in turn is about 8 miles by good dirt road south and east of Winston.

The prospected area was not visited. Mr. Nick Ortega, who is head of the only permanent family in Chise, explained that the prospect is on Ladder Ranch property and that he did not have authority to grant us permission to go on the property. He further explained that the Trujillo lease property belonged to his relatives at the time of the prospecting. The prospecting was done with no heavy equipment at the site, and no ore was ever hauled off the lease. The Trujillos subsequently sold the property to Graves Evans of the Evans Ranch, and since then the Diamond A cattle Co., of Roswell has purchased it and incorporated it into the Ladder Ranch. Permission to go on the Ladder Ranch must be obtained from Art Evans, manager, telephone 895-5381.

The deposit occurs in a gray and red shale and limestone pebble conglomerate of the Abo fm.; 4 small trenches were dug (RME-160, 1970).

The prospect was registered with the State Mine Inspector's Office under the name Trujillo lease in April, 1956 with Gar-Pac, Inc., as the owner/operator.

References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC; p. 182, (microfiche only).
(2) N.M. State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 5/21/80.

Date visited May 20, 1980

Mine name(s) Mitchell Price Prospect County Sierra

Section 12 Twnsh. 13S R. 5W

Quadrangle sheet Cuchillo 7½'

Mining district

Elevation approximately 4700'

Nearest city and/or dwellings Truth or Consequences, 7 miles southeast; municipal airport, 3 miles northeast.

The prospect is located in the north ½ of Sec. 12 (exact location not known). Directions given in RME-160 (1970), are as follows. Go north of Truth or Consequences on (old) highway No. 85. Then turn left and proceed up Cuchillo Negro Creek (passing under I-25) for 6.7 miles; then left out of canyon to the south for 0.3 miles to the claim.

During the present investigation a locked gate was encountered at about 3 miles up the creek. It was later learned from Dr. Hubble in Truth or Consequences (telephone 894-3531 office, or 894-2861 residence) that there is a way around the locked gate, namely by driving in the stream bed, but that the prospecting up in section 12 was minor, consisting of a few piles of rock.

RME-160 (1970) stated that there is one small discovery pit, 4' x 6', 10' deep in a recrystallized limestone member of the Magdalena formation. No uranium minerals observed during the AEC examination of the property in September, 1955. Radiometrically determined U_3O_8 content was .002%. Owners were A. Armstrong and Buell Price of Truth or Consequences.

The prospect was never registered with the State Mine Inspector's office, and there is no recorded production.

References: (1) U.S. AEC RME-160, 1970, Preliminary Reconaissance for Uranium in in New Mexico, 1950-1958; GJO/AEC; p. 177 (microfiche only).
(2) Field notes, 5/20/80.

Date visited 5/20/80

Mine name(s) Sierra (Sierra Mining)(Plainview #6) County Sierra

Section N½ 4 Twnsh. 17 S R. 4 W

Quadrangle sheet Garfield 7½'

Mining district Pittsburg

Elevation 4,840'

Nearest city and/or dwellings Arrey (3 3/4 mi. W-SW)

The Sierra Mining workings are located in the N½ sec. 4. To reach the workings from Truth or Consequences proceed southward on old U.S. no. 85 to Caballo Dam. Cross the Rio Grande at Caballo Dam and proceed south along the east river road for about 1½ miles, or until the road ascends the river bank to higher level. At this point take the side road leading eastward towards the mountains. Road will lead to both the Sierra and the Red Rock Claims.

The Sierra workings consist of a 180' long east-west trending face cut with an adit driven northward into it just to east of center (see photos a & b). Adit is 5' high, 4' wide, and 20' long. Scintillometer readings at portal were up to 2,300 cps. On small muck piles or waste piles just outside readings ranged up to 3,800 cps. Mineralization is apparently in the form of fracture fillings and veinlets in an altered granitic rock. Photo (c) is an additional view of the mine site showing relationship to small drainage below.

A location notice at the site stated the claim was located in November, 1952, in sec. 4 of T 17 N., R 4 W. The claim was given the name Plain View No. 6 and was ascribed to the Pittsburg Mining district. The deposit is discussed in Staatz, et.al., 1965

The adit poses no great hazard other than the radiation level which is about 46 x background. Mine was last registered with State Mine Inspector's Office on March 26, 1954.

Approximately ¼ mile southwest of the mine still in sec. 4 is the site of other claims staked for uranium (photo d) in similar granitic rock. Rocky Mountain Energy Co., drilled a 10' deep hole in January 20, 1976 and put up a discovery monument. The claim was given the name Add 14, but they described the location as being in sec. 33 of T 17 S. It is actually in sec. 4, but if it were sec. 33 it would have to be in T 16 S.

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Staatz, Mortimer H., Adams, John W., and Conklin, Nancy M., 1965, Thorium Bearing Microcline - Rich Rocks in the Southern Caballo Mountains, Sierra County, New Mexico, U.S.G.S. prof. paper 525-D.
(3) Field notes, 5/20/80.

SJ-5

Photo (a) Looking eastward along face cut and bench in granitic rock at the Sierra Mining workings; person at center photo is standing directly out from adit shown in photo (b).

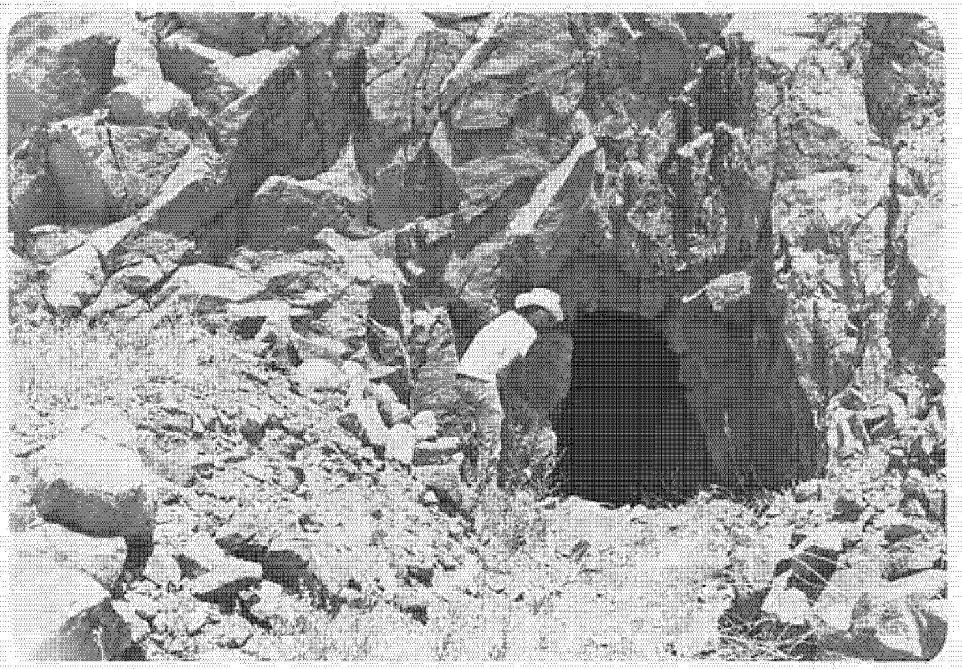


Photo (b) Looking northward into 5' high, 4' wide, 20' long adit driven into face cut shown in photo (a).

Photo (c) Looking westward at small tailings pile and lip of bench cut directly out front of adit in photo (b). Note small drainage at far left.

Photo (d) Claim markers in sec. 4 about ¼ mile southwest of Sierra Mining workings. Cut in background is in altered granitic rock. Rocky Mountain Energy Co., did some drilling at this site on 1/20/76.

Date visited 5/21/80

Mine name(s) Glory and Empire Claims County Sierra

Section 13 & 14 Twnsh. 10 S R. 8 W

Quadrangle sheet Jaralosa Mountain 7½'

Mining district Iron Mountain

Elevation 7,500'

Nearest city and/or dwellings Double Arrow Ranch, 3½ miles southwest, Mr. Pat Garrett, Manager.

The claims are in section 13 primarily, but extend into section 14. The workings and claim markers found during this investigation lay in the NW¼ section 13. The access road crosses private land at several points and permission to travel it and key to locked gate must be obtained from Mr. or Mrs. Pat Garrett at the Double Arrow ranch which is located 3 miles north of Winston on the left side of the highway. (For correspondence their address is Winston, N.M. 87943).

One of the Empire claim markers was found in the NW¼ sec. 13, just 50' north of the road. It was the Empire #42, dated April, 1969; no nearby workings noted. A preliminary reconnaissance report in RME-160 (1970) stated that the Glory prospect lay immediately south of the Empire claims, so a southward traverse was made which lead to the discovery of another claim marker. This one much more recent named the WRB #44, dated April 1979 (see photo a). Again, no nearby workings noted. A southward and westward traverse was continued, leading into the E½ of sec. 14 and the east-west road shown in photo (b) was found, with no workings nearby. The road continues westward to the Invincible Mine and other copper prospects in section 14. RME-160 (1970) also stated a 5' x 10' prospect pit, 3' deep was dug on the Glory claim in a silicified siltstone member of the Abo fm. A grayish siltstone member was noted in several localities, but no prospect pit was found.

The Empire Claims are discussed in DAO-4-TM-4 (Boyd, 1957). The claims were examined in late 1955, early 1956, and some trenching and bulldozing had been done at that time. Mineralization was listed as uranophane and beta-uranophane, plus a black uranium mineral, probably uraninite, which is associated with chalcocite. No claim markers were found that dated back to the initial discovery period of 1955-56.

The State Mine Inspector's Office records show a Glory prospect (Cu and U_3O_8) in section 12, 13 and 4? registered in January, 1958 by the Millite Mining and Development Corporation. An Empire Mine in sec. 13 was registered in June, 1955 as a uranium and copper property by R. R. Benedict Exploration.

A very small amount of uranium was produced from this property according to William Chenoweth (personal communication) who has informed us that production statistics are being made available in the form of U.S. Dept. of Energy Ore Production Reports-U.S. Government Contracts, 1948-1970.

References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC; p. 178.
(2) Boyd, Fred S., Jr., 1957, Uranium Occurrences on the Empire Claims, Iron Mountain Mining District, Sierra Co., New Mex.; U.S. AEC, DAO-4-TM-4 (Raw Materials Office).

turn

(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 5/21/80.

SJ-9

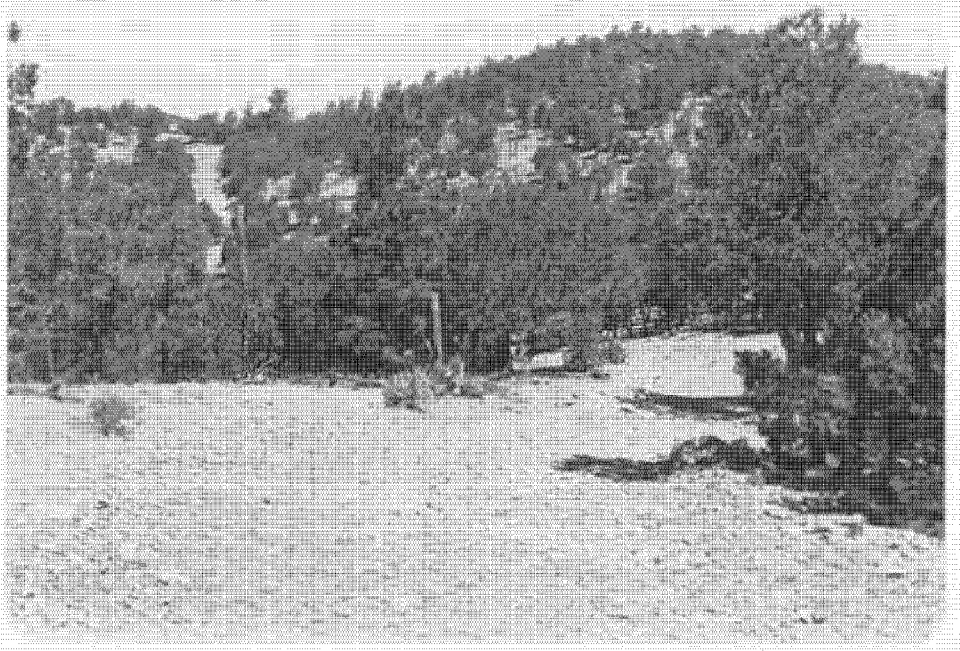


Photo (a) Looking northwestward on old Empire claim; 4" x 4" post at center marks a recent location by D. E. Schneider, called the WRB #44. The WRB #40 was found a short distance to north.

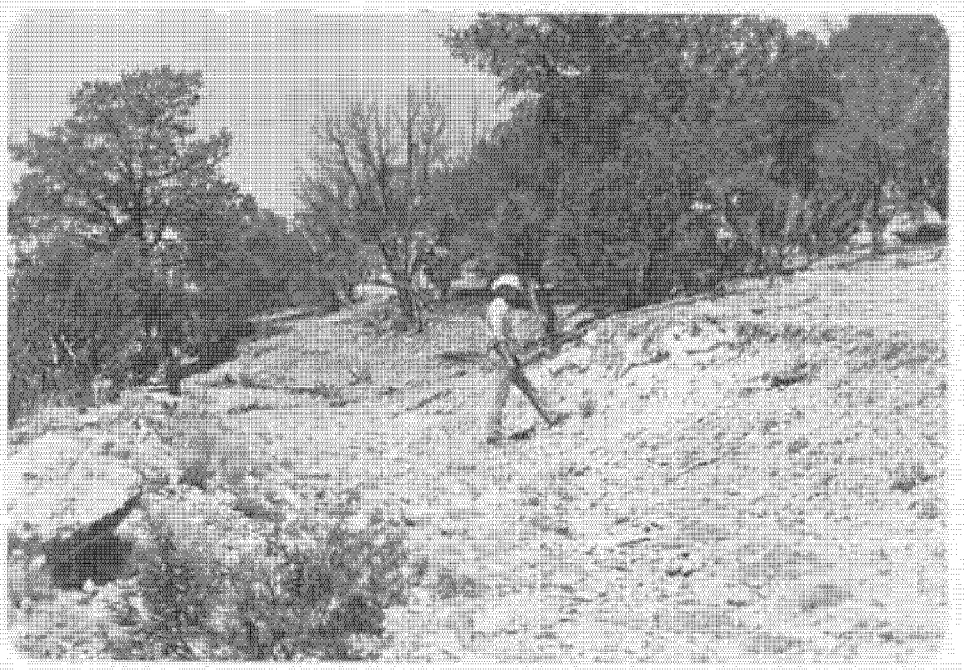


Photo (b) Looking west at remains of old prospecting road immediately south of old Empire claims, possibly on Glory claim.

SI-10

Date visited 5/21/80

Mine name(s) Pitchblende Strike (Terry prospect) County Sierra

Section 26 Twnsh. 10 S R. 6 W

Quadrangle sheet Monticello 7½'

Mining district -

Elevation 5,710'

Nearest city and/or dwellings Monticello (1 3/4 mi. SW)

The Pitchblende strike is located in the NE¼ of sec. 26 about 1 3/4 miles northeast of the town of Monticello. To reach the site take the dirt road leading northeastward at the west edge of town and travel northeastward for about 1 3/4 miles then take side road to right. Proceed about another 3/4 miles to the mine site.

The workings consist of a 12' wide, 175' long trench cut in coarse Quaternary alluvium (photo a), and a regraded area several hundred feet long (photo b), that was either the site of 2 prospect pits (Lovering, 1956), or the site of a small shaft and adit as indicated by the symbols on the Monticello 7½' quadrangle. The regrading or backfilling has made it impossible to determine the type of workings. A timber partially exposed in the rubble at this site could be a shaft collar; an adit here seems a little unlikely. The State Mine Inspector's Office records do not indicate the type of mine.

In addition to the above there is a bench cut several hundred feet long just up slope to the east (see photo c) from the site; and a 6' x 8' circular pit in between (photo d). Workings shown in photos (b) through (d) are 600' northwest of trench cut in the Quaternary alluvium.

Uranophane is associated with fluorite in a jasperoid breccia that has been identified as the Kelly limestone (Lovering, 1956). The deposit is in a fault breccia that strikes N 68° E across the jasperoid. The breccia is composed of jasperoid fragments, igneous rock fragments, and limestone. The matrix consists of silica and fluorite. Vugs in the fluorite are filled with clay, and fractures in the fluorite and jasperoid contain uranophane and iron oxide (Lovering, 1956). Scintillometer readings at the deposit were in the 1000-1400 cps range except for the upper bench cut (photo c) which registered only 300 cps. Purpose of the cut in the coarse alluvium is not clear; scintillometer response was up to 140 cps (or 2½ x background).

A total of 4 claims were located at this locality (Pitchblende nos. 1-4). No production is indicated in any of the references cited. The State Mine Inspector's Office does not give a final registration date in the inactive uranium mine file, however, the mine is listed under "metal mines" in the 43rd and 44th annual reports of that office; the operator was McDaniel Investment Company.

References: (1) Lovering, T. G., 1956, Radioactive Deposits in New Mexico; U.S.G.S., Bull. 1009-L; p. 368.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87; p. 223.

turn

SI: 11

(3) New Mexico State Mines Inspector's Office, inactive uranium mine file.
(4) New Mexico State Mines Inspector's Office, 1955, 43rd annual report; p. 49.
(5) New Mexico State Mines Inspector's Office, 1956, 44th annual report; p. 55.
(6) Field notes, 5/21/80.

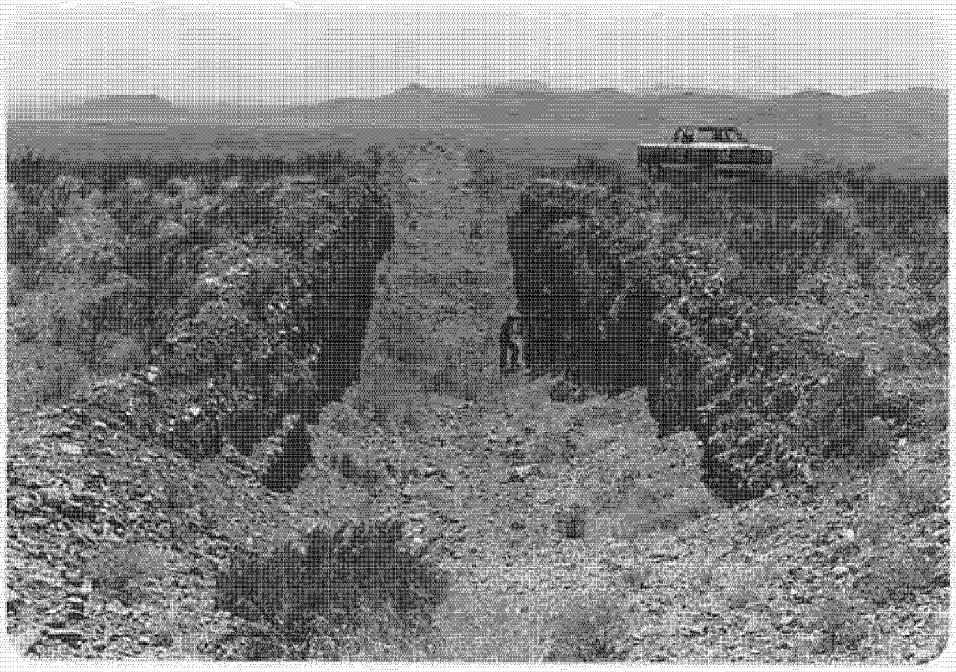


Photo (a) Looking southwest at 12' wide, 175' long trench in alluvium at Pitchblende strike; pit attains maximum depth of nearly 18' at middle.

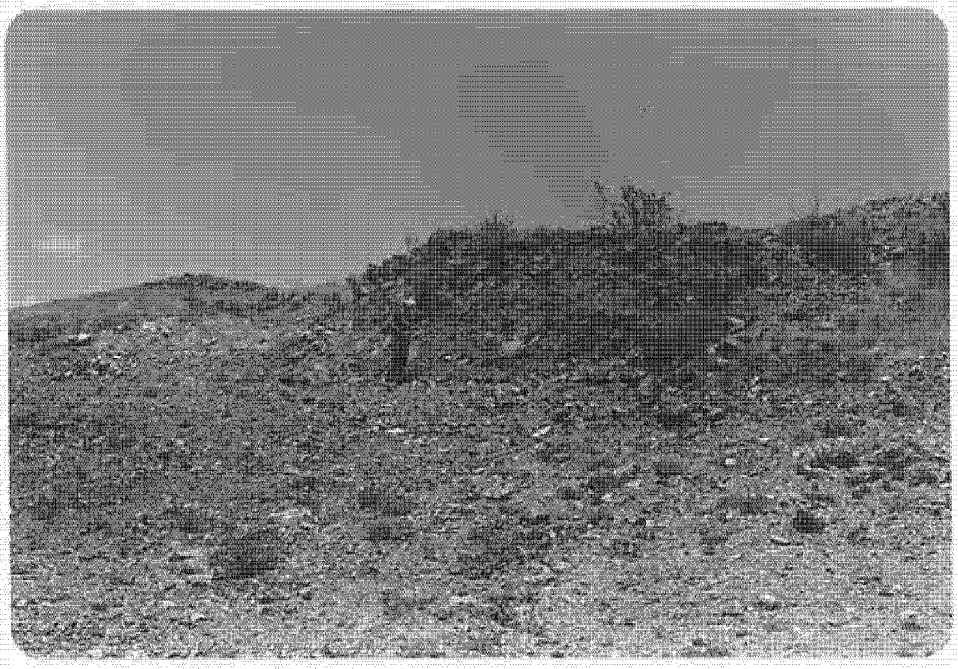


Photo (b) Looking northward at backfilled and regraded shaft or adit site. Uranophane is associated with fluorite in a fault breccia in the Kelly limestone.

Photo (c) Looking eastward at upper bench cut, several hundred feet upslope (eastward) from site of photo (b).

Photo (d) Small pit at intermediate level between shaft or adit level shown in photo (b) and the upper bench shown in photo (c).

SI-14

Date visited 5/20/80

Mine name(s) Red Tiger (Bobby Johnson) County Sierra

Section 1 and 2 Twnsh. 13 S R. 7 W

Quadrangle sheet Thumb Tank Peak 7½'

Mining district -

Elevation 5,320'

Nearest city and/or dwellings Ladder Ranch Camp (2 mi. SW). Foreman (Ronnie Calver

Some very old prospecting pits occur in the south ½ of sec. 1 just southeast of the Double S Peaks on the Ladder Ranch. To reach the area take the Cuchillo exit just north of Truth or Consequences on I-25, and proceed westward to the town of Cuchillo. On the west edge of town take dirt road to left leading southwesterly and follow for about 9 miles to the entrance to the Ladder Ranch.

The prospected area was not visited. Ranch foreman, Mr. Ronnie Calvert did not have the authority to grant access to the site. Mr. Art Evans, Ranch Manager, telephone no. 895-5381 must be contacted before site can be investigated. (He was not reached by telephone that evening, and so we could not return the following day). Mr. Calvert, however, did describe the site as consisting of a few very old ridges and pits that pose no hazard to man or beast. Neither the ranch hands nor the management has any complaints.

According to RME-160, (1970) there was some prospecting for copper back in the 1930's. In 1956 some exploration work for uranium was done; 6 small pits about 4' x 4' and 2' deep were dug in a greenish gray siltstone of the Abo formation. Mineralization was apparently along small fractures. No production reported.

The State Mine Inspector's Office, however, has the workings listed as "uranium (open cut)". It was last registered with that office in January, 1957.

References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC; p. 188; (microfiche only).
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 5/20/80.

SJT 15

Date visited 5/14/80

Mine name(s) Paran (Parau Claim) County Sierra

Section 27 Twnsh. 17 S R. 4 W

Quadrangle sheet Upham 15'

Mining district -

Elevation 5,000'

Nearest city and/or dwellings Tipton Ranch (3 mi. N-NE)

The Paran Claim is located in the SE¼ sec. 27 about 1½ miles east of I-25 near the Sierra-Dona Ana County line. To reach the claims from I-25 take the Derry and Garfield exit and proceed east about 3/4 mi. on dirt road. Then take side road to the right, cross stream bed, and proceed northeastward to claim/mine site.

The workings consist of a 6' wide, 10' long, and 6' deep open cut driven northwestward in altered Pennsylvanian limestone (see photos a & b). The Garfield fault trends east-west through the site, with Bliss sandstone on the north faulted against Penn-Perm strata on the south (probably Abo & Madera). Mineralization is in the limestone; limestone is altered and brecciated. Minerals noted were limonite, hematite, siliceous vein and fracture fillings, and traces of yellow mineralization which could be uraniferous. Maximum scintillometer reading in the cut was 300 cps; the small ore pile at the entrance to cut (at left in photo b) read up to 350 cps.

No production is recorded from the site and the "mine" is not on file at the State Mine Inspector's Office.

A small 6' x 6' open pit was found approximately 1/3 mile northeast of the above pit. Scintillometer response was not above background. Additional prospecting is evident ½ mile to the east, but may not be in sec. 27.

References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC, p. 191.
(2) Field notes, 5/14/80.

SJ-14

Photo (a) Looking W-NW down ramp leading to small open cut (left center) on Paran Claim.

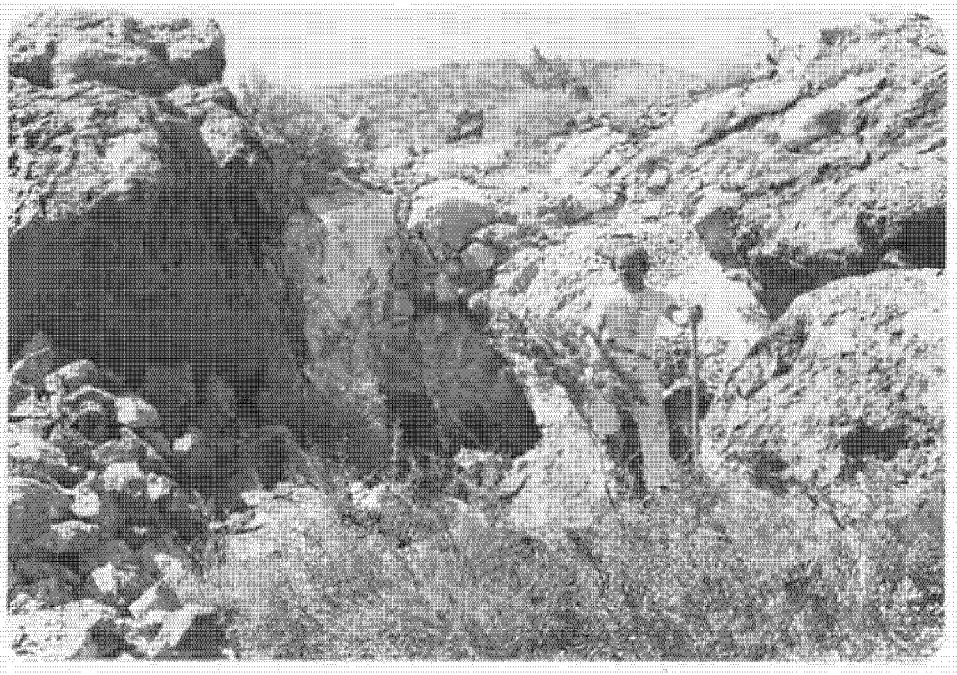


Photo (b) Looking NW into 6' wide, 10' long, open cut shown in background in photo (a).

SOCORRO COUNTY

Quad: Bustos Well 7½'

Quad: Indian Spring Canyon 7½'

Quad: Lemitar 7½'

Quad: Riley 15'

Quad: Sierra de la Cruz 7½'

Quad: South Baldy 7½'

Date visited 8/14/79

Mine name(s) Lucky Don (Bonanza) County Socorro

Section NE¼ 35 Twnsh. 2 S R. 2 E

Quadrangle sheet Bustos Well 7½'

Mining district Chupadera

Elevation 6,040'

Nearest city and/or dwellings Ranch house, 1½ miles west

The Lucky Don (Bonanza) is located in the NE¼ NE¼ sec. 35 on the west side of a San Andreas limestone ridge. It is accessible by the dirt ranch road that leaves highway no. 380 about 10 miles east of San Antonio. Follow the ranch road northward along the east side of the hogbacks for about 19 miles to sec. 35; look for old wooden loadout facility and tailings dump on right hand side of road (see photos a & b).

The mine consists of a face cut about 170' long on a moderate slope in dense gray limestone of the San Andreas fm. (photo c). A cluster of 4 gopher holes or stub adits have been driven into the face, following small mineralized fracture zones or bedding planes, (photos c, d, and e). Maximum length of underground workings is about 20'; roofs in general appeared stable, but were not closely examined.

The deposit consists of tyuyamunite and possibly carnotite disseminated along fracture and bedding surfaces as intergranular fillings in a tabular zone 300'-400' long, 50' wide, and 35' thick (Hilpert, 1969).

The deposit was examined by AEC geologists in April, 1955. At that time Holly Uranium Corporation owned the property which consisted of 103 claims (RME-160, 1970).

The mine was active during 1955-1956 and again during 1960-63 (Hilpert, 1969). The State Mine Inspector's Office carried the mine as active in the 43rd, 44th, and 45th annual reports of that office. By 1956 the property had been transferred to the Union (Umino)? Company.

Production statistics are being made available in the form of "U.S. Dept. of Energy Ore Production Reports - U.S. Government Contracts, 1948-1970", according to William Chenoweth U.S. Department of Energy (personal communication)

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 55.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87; p. 223.
(3) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-58; GJO/AEC; p. 202 (microfiche only).

turn

3-1

(4) N. Mex. State Mine Inspector's Office, 1955, 43rd annual report; p. 50.
(5) N. Mex. State Mine Inspector's Office, 1956, 44th annual report; p. 56.
(6) N. Mex. State Mine Inspector's Office, 1957, 45th annual report; p. 49.
(7) N. Mex. State Mine Inspector's Office, inactive uranium mine file.

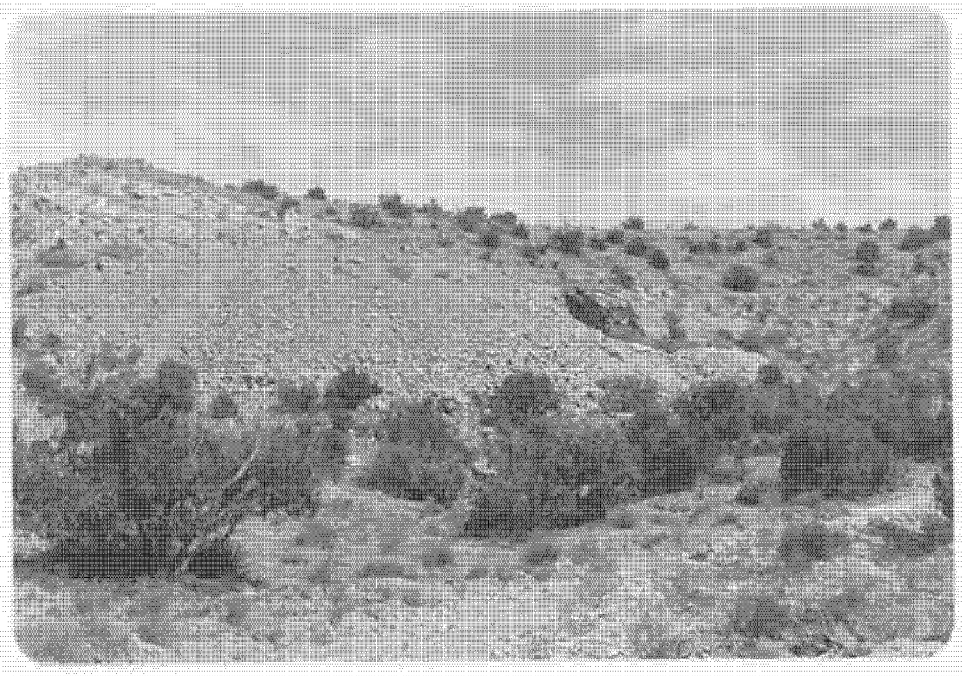


Photo (a) Looking southeastward at mine dump (center and left) and wooden ore chute at Lucky Don Mine; close-up of ore chute shown below.

Photo (b) Looking northward at wooden ore chute and load out area at Lucky Don Mine; note person at claim marker in load out area for scale.

So-3

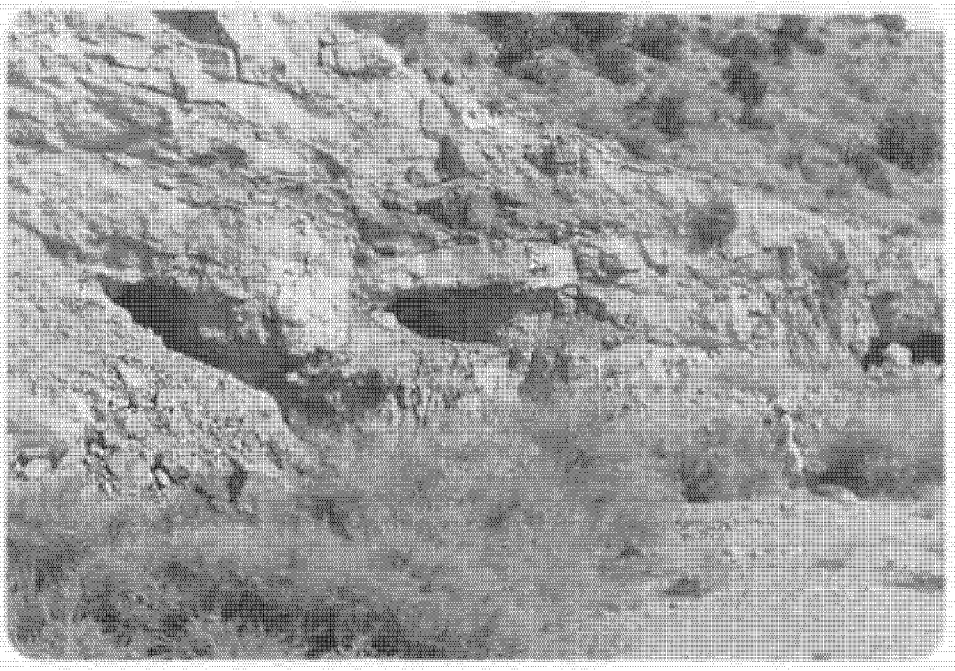


Photo (c) Looking eastward at open cut showing gopher holes or stub adits driven into face-close ups on following two photographs.

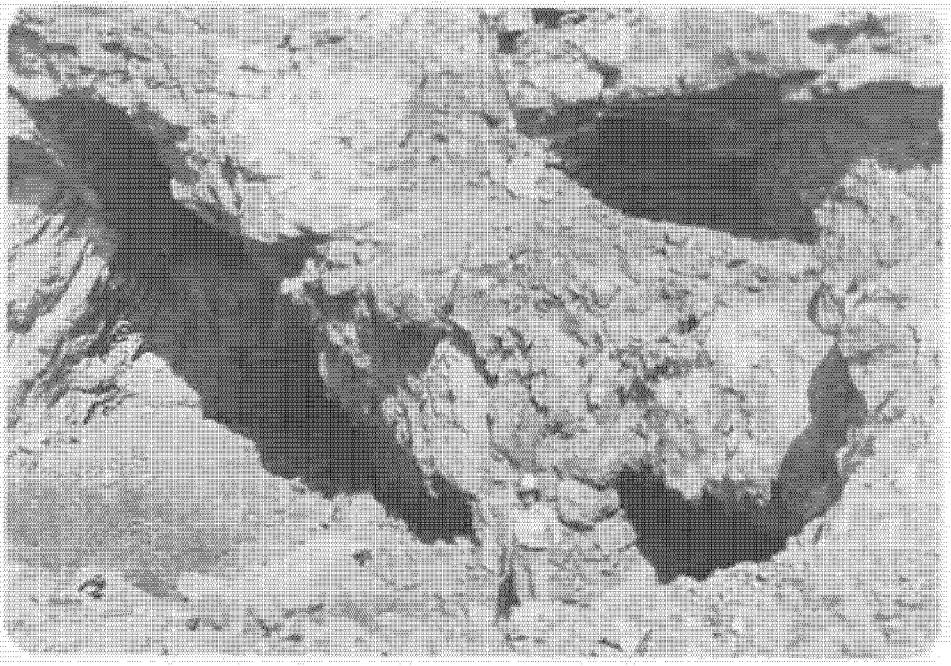


Photo (d) Close-up of gophering shown on face of cut in photo (c). Area at left shown in more detail in photo (e).

Sp-4

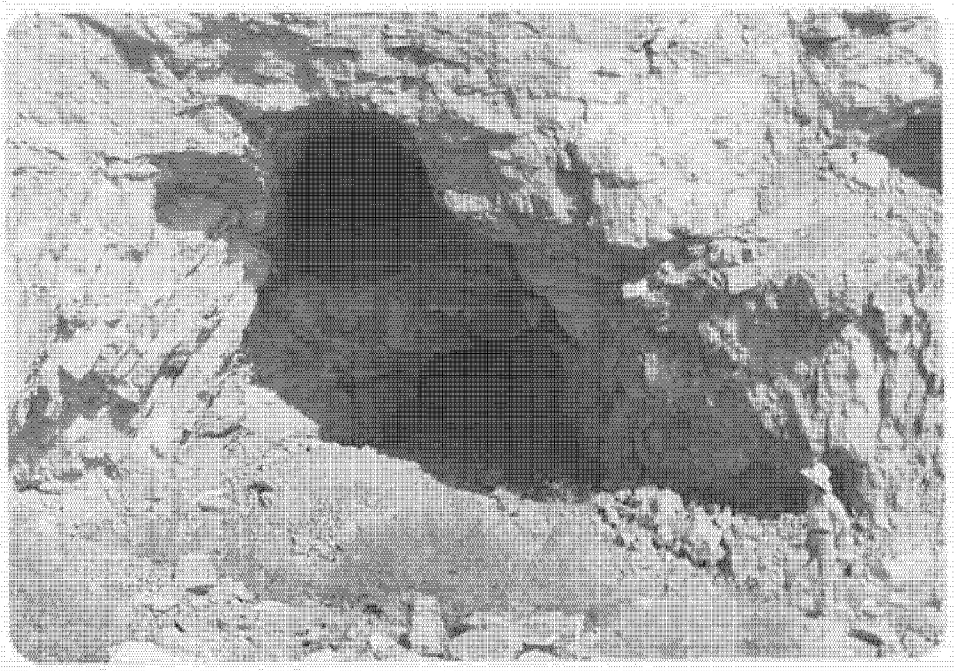


Photo (e) Close-up of gopher holes shown at left in photo (d); note person at lower right for scale.

Date visited 8/14/79

Mine name(s) Little Davie County Socorro

Section NE¼ 35 Twnsh. 2 S R. 2 E

Quadrangle sheet Bustos Well 7½'

Mining district Chupadera (or Trementina)

Elevation 6,200'

Nearest city and/or dwellings Ranch house, 1½ miles west

The Little Davie is located in the SW¼ NE¼ of sec. 35 (Hilpert, 1969) about ¼ mile south-southwest of the Bonanza, on a locally prominent ridge. The site may be reached by taking highway no. 380 east from San Antonio for about 10 miles to the Carthage area. Then take the ranch road to the left (north) along east side of hogbacks about 19 miles to sec. 35. Continue northeastward around north side of limestone ridge and take right fork and head south, east for about 1/3 mile, then turn right again and begin climbing back side of ridge to mine site.

The workings consist of an 8' x 12' prospect pit about 6' deep (see photos a & b). Deposit is in middle limestone member of the San Andres fm. immediately east of and in footwall of a northeastward trending normal fault (Hilpert, 1969). No secondary uranium minerals are visible.

The mine was registered with the State Mine Inspector's Office in June, 1956 by the Umino Co.; Hilpert (1969), however, stated that some ore was produced in 1955.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources Bull. 87; p. 223.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 8/14/79.

C-6

Photo (a) Looking eastward at 8'x 12' open pit on Little Davie workings; access road shows in background. Size of waste pile in background indicates additional stripping in immediate area.

Photo (b) Close-up of open pit shown in (a).

Se-7

NM-247-3-1

Date visited 5/14/80

Mine name(s) Hook Ranch Prospect (Jaralosa) County Socorro

Section SE¼ SW¼ 13 Twnsh. 1 N R. 6 W

Quadrangle sheet Indian Spring Canyon 7½'

Mining district -

Elevation 6,700'

Nearest city and/or dwellings Henderson (Hook) Ranch, 1¼ miles southwest

The Prospect is located in the SE¼ SW¼ sec. 13 on the west bank of Jaralosa Creek. It may be reached by traveling northwestward out of Magdalena on the Alamo Reservation road for about 18 miles to Jaralosa Creek; then turn northward along creek bed for about 2 miles to prospect.

Prospect consists of a 200' x 500' area of bulldozed ground, elongate north-south with, the main prospect at the southern edge. The main prospect is a somewhat circular cut, 40' to 50' across, with a 15'-20' highwall on the south (see photos a & b). The deposit is in a yellowish brown (oxidized) conglomeratic sandstone in the upper 2/3 of the Baca formation. Uranium minerals appear to be associated with carbonized wood fragments up to 1' long. Scintillometer readings in the deposit range up to 6,000 cps. (background about 40 cps). The waste pile immediately to the east produced readings of 500-700 cps.

About 150' north of the main prospect is an 80' long north-south trending dozer cut in red sandstone; maximum depth of cut is 5'-10' (see photo c). Scintillometer response was in the 300-700 cps range. Immediately to the northwest of this cut is a small east-west trending cut in oxidized conglomeratic sandstone (photo d).

Hilpert (1969) listed a Hook Ranch airborn anomaly in section 13 with a sample that assayed 3.27% U_3O_8. He also mentioned a Hook Ranch prospect in sec. 24 that produced some ore in 1959-61. The sec. 24 prospect was not identified during the present investigation.

The State Mine Inspector's Office received a registration on this property under the name Jaralosa in June, 1961. The operator was listed as Big Tex Mining Company. The registration indicated a uranium-vanadium deposit.

The writer wishes to acknowledge the field assistance of Dr. Richard Chamberlain during this investigation.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 54.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 5/14/80.

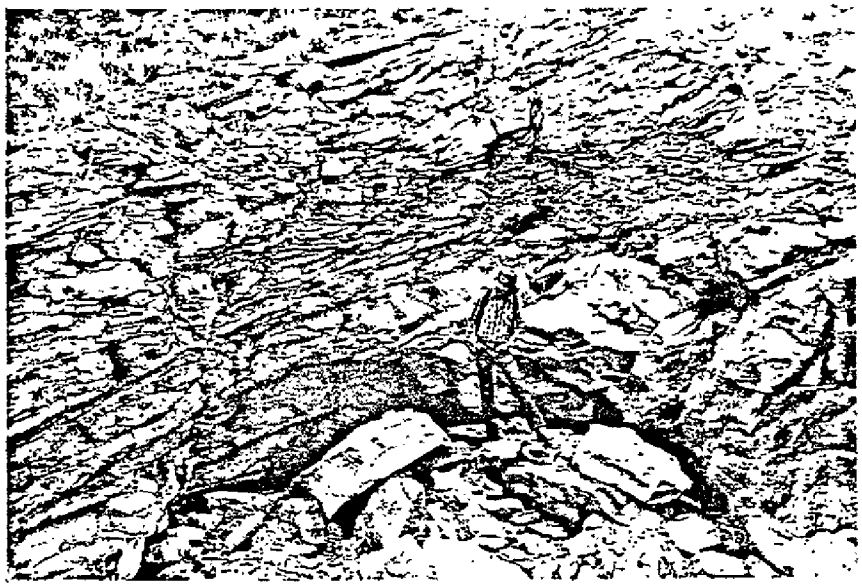


Photo (a) Looking southward into main prospect on Hook Ranch deposit.

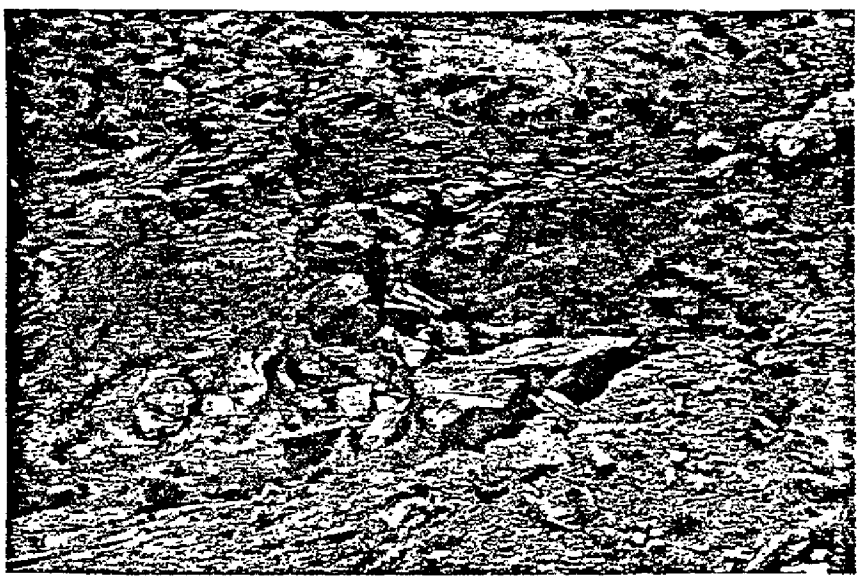


photo (b) Looking southwestward at main prospect of same.

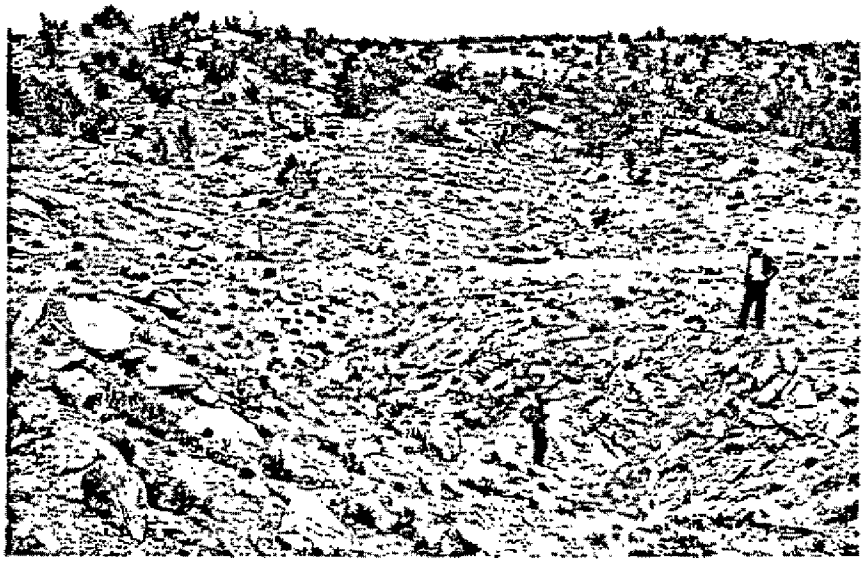


Photo (c) Looking northward into an 80' long dozer cut in red sandstone; 150' north of main prospect.

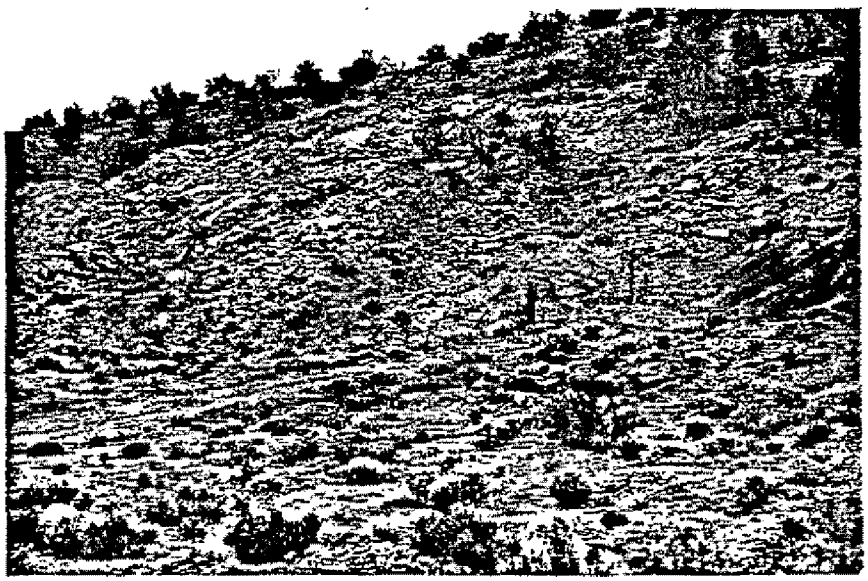


Photo (d) Looking southwestward small prospected area in conglomeratic sandstone, just northwest cut shown in photo (c).

50-70

Date visited 10/5/79

Mine name(s) Jackpot No. 1 (Carter, Tolliver, Cook) County Socorro

Section W½, W½ 5 Twnsh. 2 S R. 1 W

Quadrangle sheet Lemitar 7½'

Mining district Lemitar Mountain

Elevation 5,600'

Nearest city and/or dwellings Lemitar, 3½ miles east

The Jackpot Prospect examined during the present investigation is a small barite deposit in the W½, W½ of sec. 5. It may be reached by proceeding north from Lemitar on the frontage road for ½ mile, then turning left (west) and proceeding on dirt road for 3.2 miles to the prospect.

The workings consist of a bulldozed area, 300' x 400', with a mineralized knob of Madera limestone in the center (see photos a & b). The limestone contains barite along fractures and bedding planes, but no anomalous radioactivity was recorded. Maximum scintillometer readings at the 12' highwall shown in the open pit in photo (a) were 50-60 cps (normal background).

The site was visited because the State Mine Inspector's Office carried a registration of the Jackpot #1 in 1956, as a uranium, vanadium, thorium, and cerium deposit. Operator was Iola Uranium Corporation.

Hilpert, 1969, mentioned a Carter-Tolliver-Cook prospect in the E½ sec. 5; uranium mineralization consists of uranophane and carnotite associated with galena, pyrite, and chalcopyrite in mafic dikes that crosscut a diorite intrusive. No prospecting was described.

The present investigation turned up additional prospecting pits and shafts 500' to 800' north of the barite pit shown in the photographs. The workings are in the diorite intrusive mass described by Hilpert (1960).

McLemore, 1980, describes radioactive carbonatite occurrences (100 times background) in adjacent sections 6 and 7. The SE¼ sec. 6 and the NW¼ sec 7 have been prospected, and a 200 ft. long adit was driven in the SE¼ SE¼ sec. 6, (Virginia McLemore personal communication)

References: (1) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bull. 87; p. 223.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 55.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) McLemore, Virginia T., 1980, Carbonatites of the Lemitar Mountains, Socorro County, New Mexico in New Mexico Geology, vol. 2, no. 4.

So-11

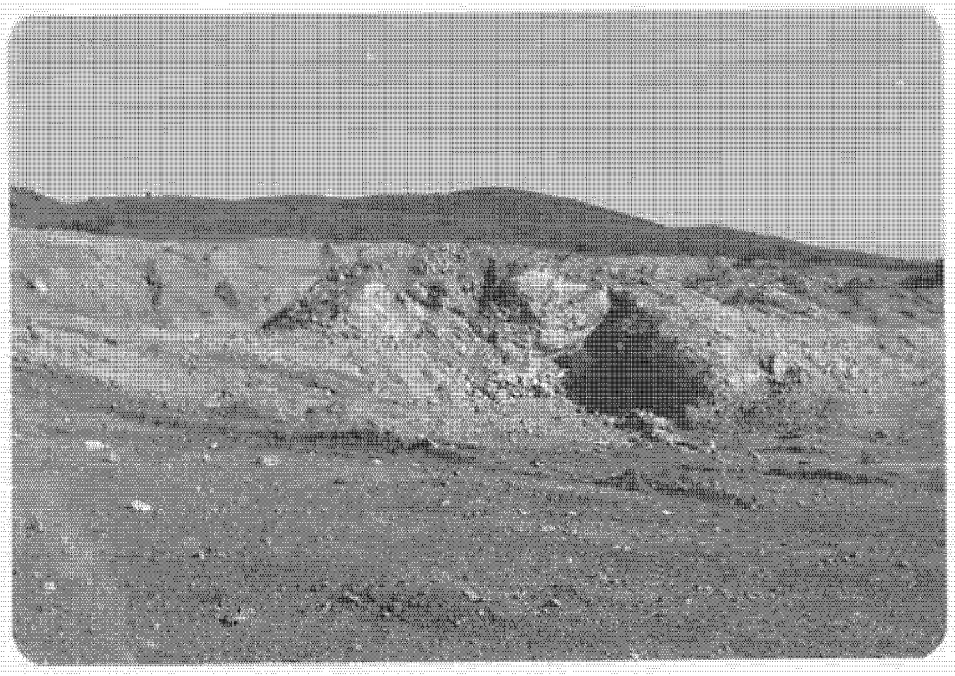


Photo (a) Looking north at small open cut in Madera limestone; highwall is about 12'.

Photo (b) Looking westward at same, with extensively bulldozed area at right and in middle background. Rio Grande Valley in background.

Se-12

Date visited 8/8/79

Mine name(s) Jeter (or Charley #2) County Socorro

Section SW¼, NE¼ 35 Twnsh. 3 N R. 2 W

Quadrangle sheet Riley 15'

Mining district Ladrone

Elevation 5,700'

Nearest city and/or dwellings Mack Brown Ranch; 2 miles southwest

The Jeter or Charley #2 Mine is located on the east edge of the Ladrone Mountains. It may be reached by taking the U.S. no. 60 exit 25 miles north of Socorro on I-25. Then get on old U.S. no. 85 southward and cross old bridge over the Rio Puerco and take dirt road to west for 11 miles to the mine.

The mine consists of a decline and one open pit, (see photos a & b). The 12°-15° decline is oriented approximately N 80° E, is well timbered, but caved in at 25' feet from portal. Portal dimensions are 6' high, 10' wide; a row of timbers leads down the center of the decline. Back is stable for the 25 foot distance to the cave in; although the timbers lean to the left danger appears minimal at this point.

The open pit is about 125 feet to the north of the portal. It is approximately 150 x 300 feet, elongate N-S, and contained a shallow pond nearly 100 feet long at the time of the visit. Local rancher who grazes the section did not complain of stock hazards or the water quality.

Directly out from the decline is a 25 x 25 foot concrete slab upon which rested the hoist and draw works; 1½ in. diam. bolts remain anchored in the foundations, see photos. The mine dump is to the immediate NW of the concrete slab and shown in the same photo; it is about 4' high and up to 100' feet in maximum dimension. No scintillometer readings are available.

Disturbance is not severe or extensive, but nevertheless highly visible; no buildings remain. Total disturbed area is 400 x 400 feet or approximately 3.5 acres.

The uranium occurs in mostly oxidized forms in a 1-10 foot thick sheared dark gray clayey material and bleached tuffaceous sandstone near the base of the Popotosa fm. (Hilpert, 1969, p. 55). The Popotosa fm., has here been faulted against the underlying Precambrian granite along the Cerro Colorado fault.

The mine was operated during the 1954-1958 period, Hilpert, (1969), however, last registration with the State Mine Inspector's Office was in August, 1957. By that time it had acquired the additional names of "Jeter and Hattie" and "Hattie #2"; the owner was listed as Seaboard Oil and Gas. Production statistics are being made available in the form of "U.S. Dept. of Energy Ore Production Reports-U.S. Government Contracts, 1948-1970" according to William Chenoweth U.S. Department of Energy (personal communication).

S.-13

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. paper 603, p. 55.
(2) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 8/8/79.

Sec 14

Photo (a) Jeter Decline, looking east from hoist foundation area; note hat for scale.

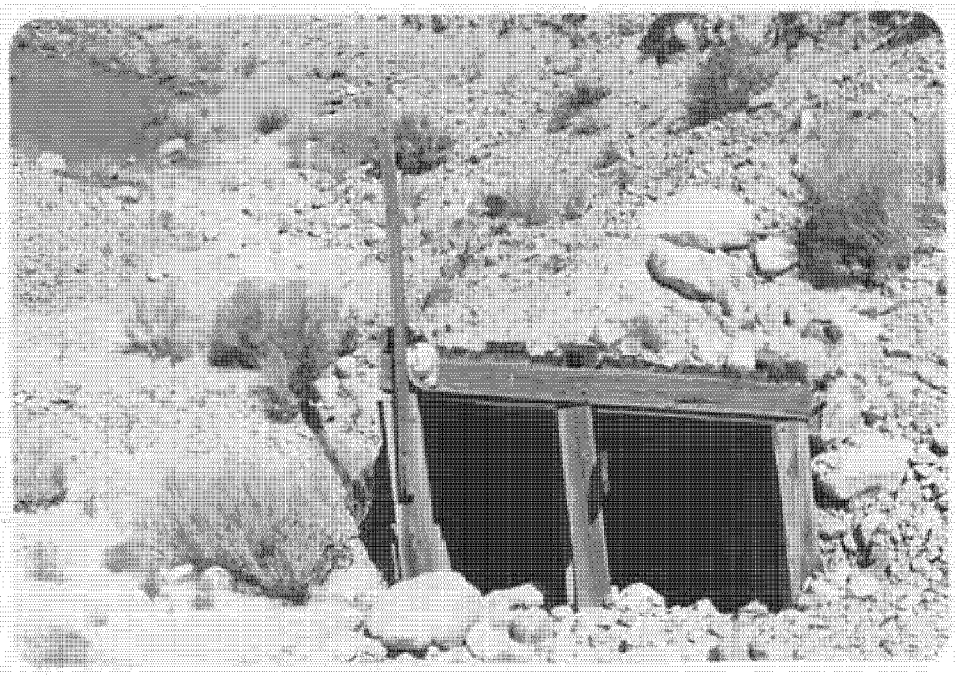


Photo (b) Close-up of Jeter Decline.

Sb-15

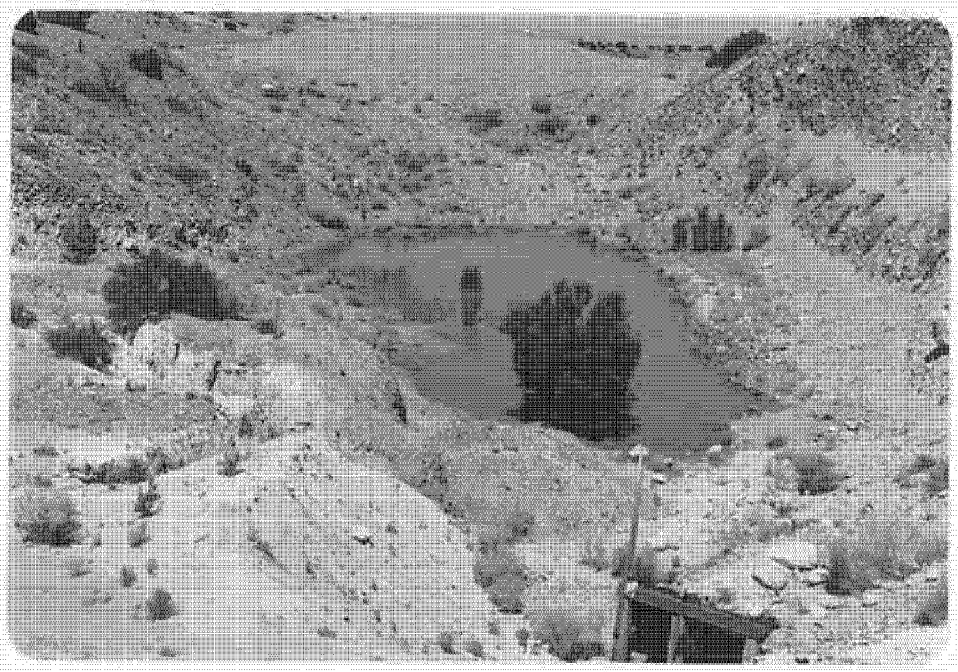


Photo C - Jeter open cut, looking north.

Photo D - Jeter hoist foundation and mine dump looking NW.

Se-16

Date visited 8/14/79

Mine name(s) Union #1 County Socorro

Section SW¼ 31 Twnsh. 1 S R. 3 E

Quadrangle sheet Sierra de la Cruz 7½'

Mining district -

Elevation 5,900'

Nearest city and/or dwellings Ranch, 4 miles to south

The Union Mine is located in the SW¼ SW¼ of sec. 31. It may be reached by taking highway no. 380 east of San Antonio about 10 miles to the Carthage area. Then take ranch road to left (north) along east side of hogbacks for about 24 miles to sec. 6 T. 2 S., R. 3 E. No mine access road exists so last ½ mile must be made on foot. Mine is indicated by shaft symbol on Sierra de la Cruz quadrangle (1972).

The mine consists of a 50° decline driven eastward in the Abo fm. (see photo a). Opening is about 5' x 5', workings go down about 18'. The timbering remains in place and holding, but it is rapidly deteriorating (see photo b). Small mine dump exists out front of decline. No uranium minerals observed on face in shaft or on the mine dump. Host rock is a very fine grained reddish brown sandstone or siltstone. A small amount of old lumber is scattered about the site; small drainage line passes several hundred feet west of mine.

The mine was registered with the State Mine Inspector's Office in November, 1955, when it was reported that a "78° adit" was being sunk. The owner/operator was Union-Gulf Oil and Mining Corporation.

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Field notes, 8/14/79.

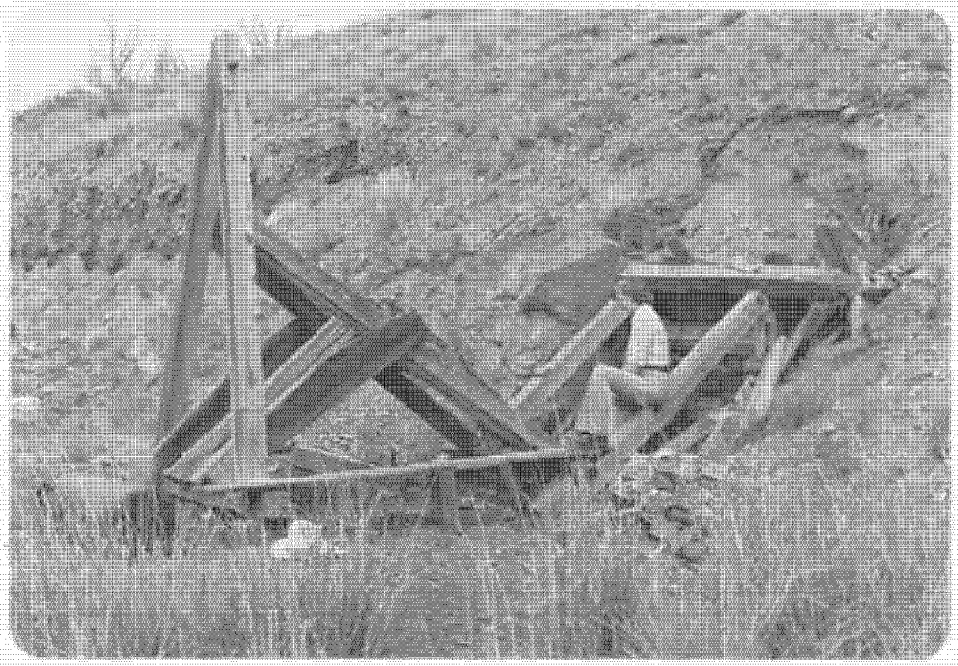


Photo (a) Looking northeastward at timbered decline of the Union No. 1 Mine.

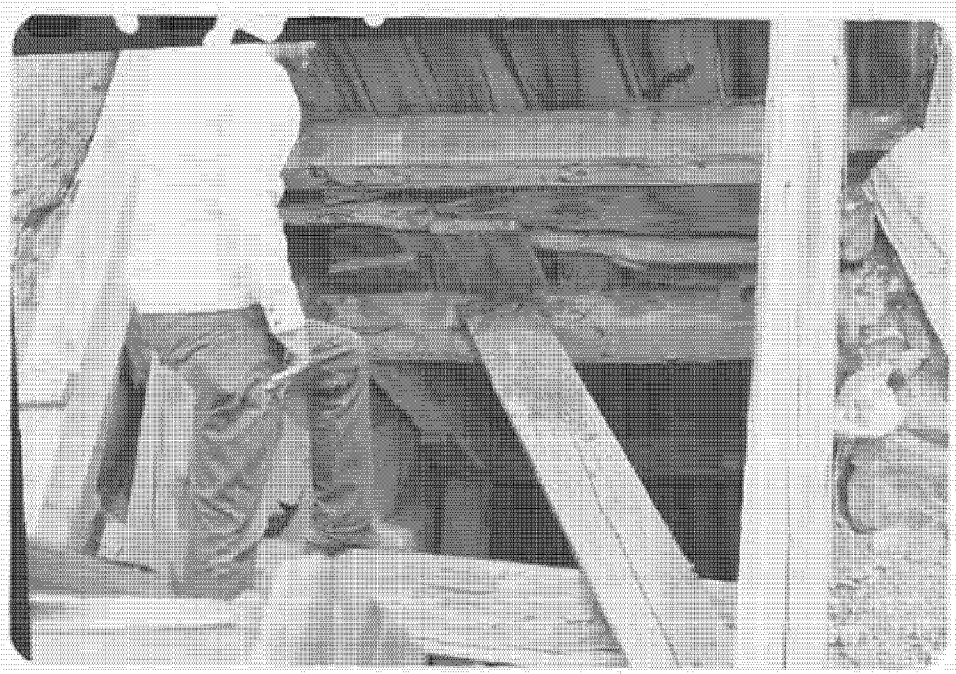


Photo (b) Close-up of opening to the Union decline.

Se-18

Date visited 8/9/79

Mine name(s) Big Chief #4 County Socorro

Section SW¼ 3 Twnsh. 4 S R. 3 W

Quadrangle sheet South Baldy 7½'

Mining district Water Canyon, Silver Mountain subdistrict

Elevation 8,600'

Nearest city and/or dwellings Langmuir Laboratory, 2½ mi. to west

The Big Chief #4 as we found it consists of 5 more or less separate workings all within a 400 foot E-W distance; in addition there are several prospecting pits in the vicinity, some of which are shown on the topographic sheet.

The easternmost of the 5 workings is an adit, 7' high, 5' wide, extending in at least 40' at which point it forks. Orientation is N 8° E; it is not timbered (see photos a & b). At the right of the portal is a decline to some lower level workings still partially open so that a man could enter but water stands a short distance down, see photo c.

Several open cuts or prospect pits were noted 100' to 200' west of adit along the upper roadway, see photo d. These are small and largely overgrown with trees and shrubs.

About 150' west of these pits is a caved shaft, photo e, which has a badly deteriorated colar indicating a size of 6' x 6'. Present depression is about 3'-4' deep and appears stable. No nearby dump was discernible.

Below this shaft downslope to the south several hundred feet is evidence of more open cut workings. It is pretty much filled with waste and rubble and it is difficult to determine how much if any material was removed, see photo f.

Downslope another 75' and back to the east approximately 200 ft. from the open cut is another adit with an orientation of N 45° W. The portal is partially blocked with coarse rubble but appears to be about 5' high, 3' wide, and is open back at least 30 ft., and maybe connects with other workings as a cold wind blows from the portal. Water stands on the floor see photo g (see insert on back of page).

Access road to mine takes off from the Langmuir Laboratory road in the NW¼ sec. 3 and winds around the wall of South Canyon for approx., 1.5 miles. Road will not accomodate heavy equipment in its present condition. This factor plus the relatively low danger level and remoteness of the mine would not seem to warrant any immediate action at the site.

Host rock for the uranium ore is a Tertiary andesite. Primary interest in the area probably was gold and silver. (It is doubtful this mine ever produced any uranium). Mine last registered with State Mine Inspector's Office in June, 1959.

turn

References: (1) State Mine Inspector's Office.
(2) R. H. Weber (oral communication).
(3) Field notes, 8/9/79.

Note: Additional photo h is looking south at mine area showing remains of chute that carried ore to a lower, more accessible, load out area. Mine workings shown in all previous photographs are distributed both east and west of area at top of chute.

The Big Chief Group has been staked by Don Kilgore, as The C & K #2, dated August, 1977.

So-20

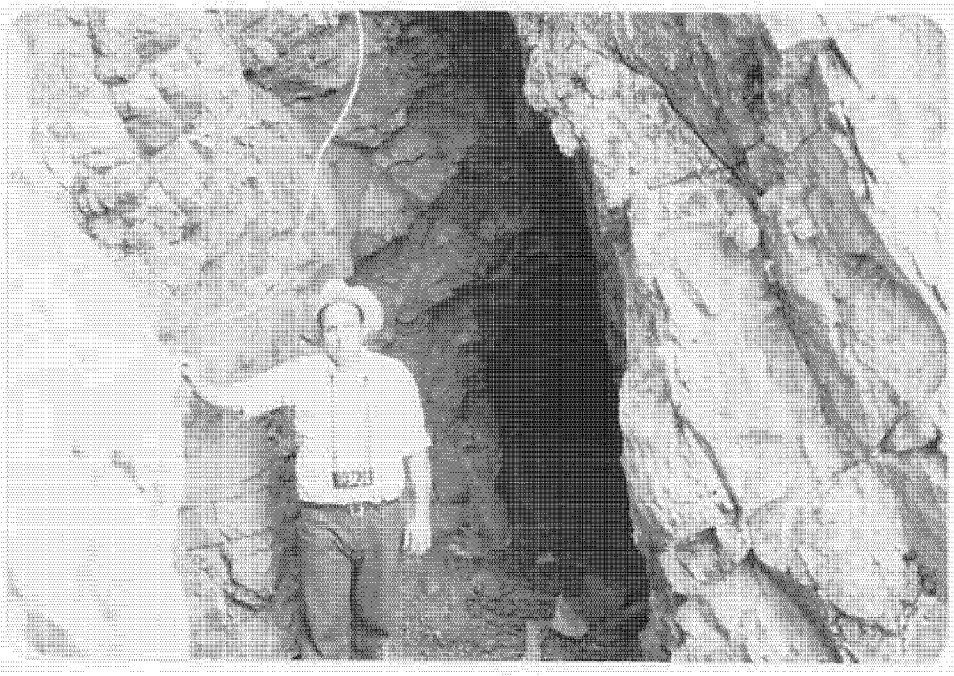


Photo (a) Big Chief #4, easternmost workings-adit.

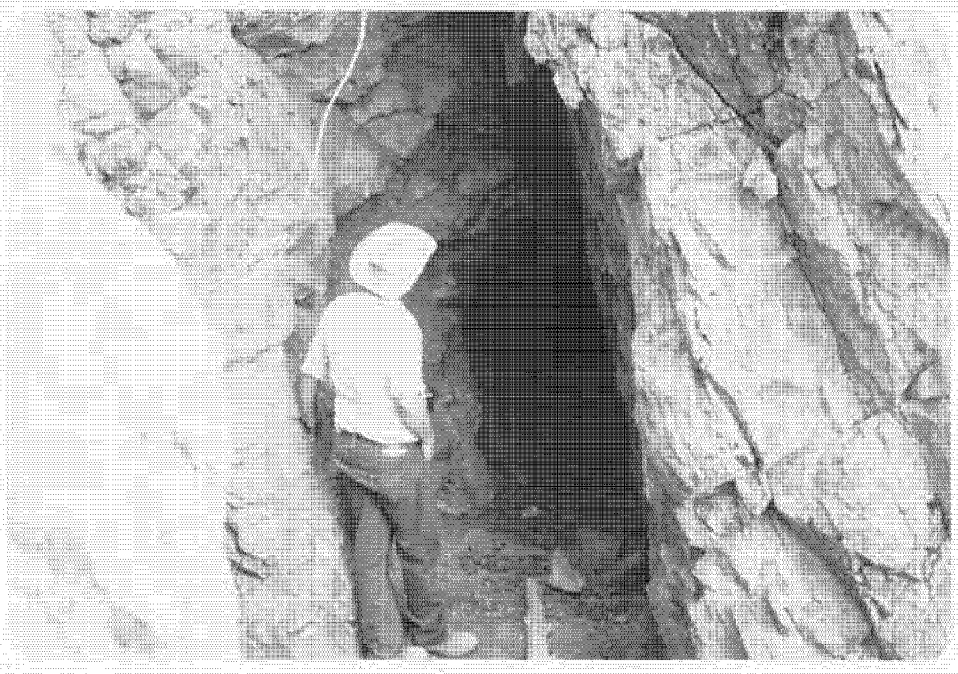


Photo (b) Big Chief #4, same as above.

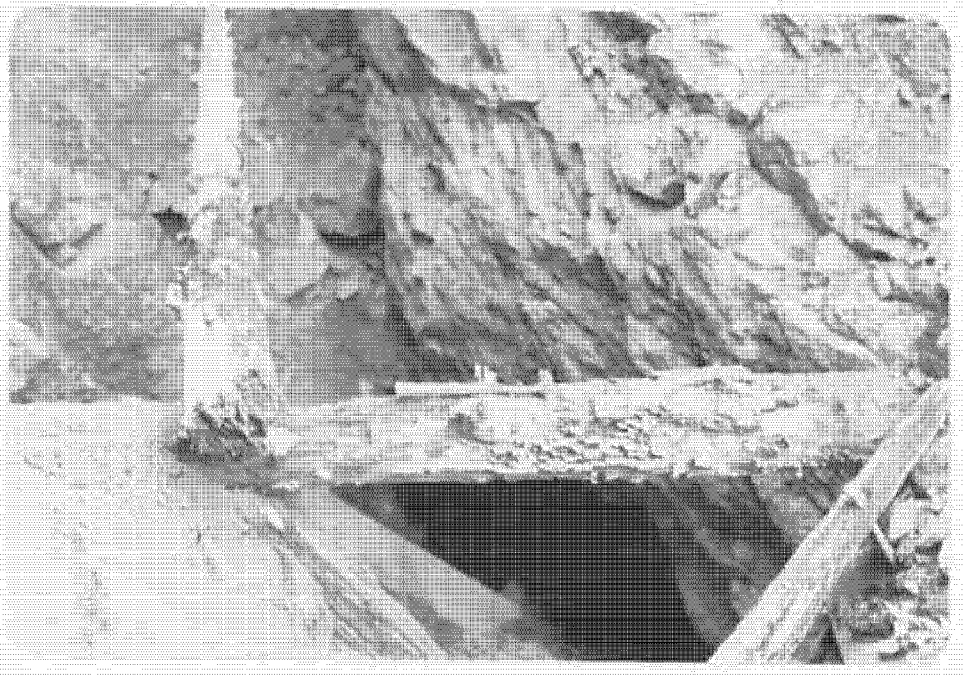


Photo (c) Big Chief #4, easternmost workings, lower level.

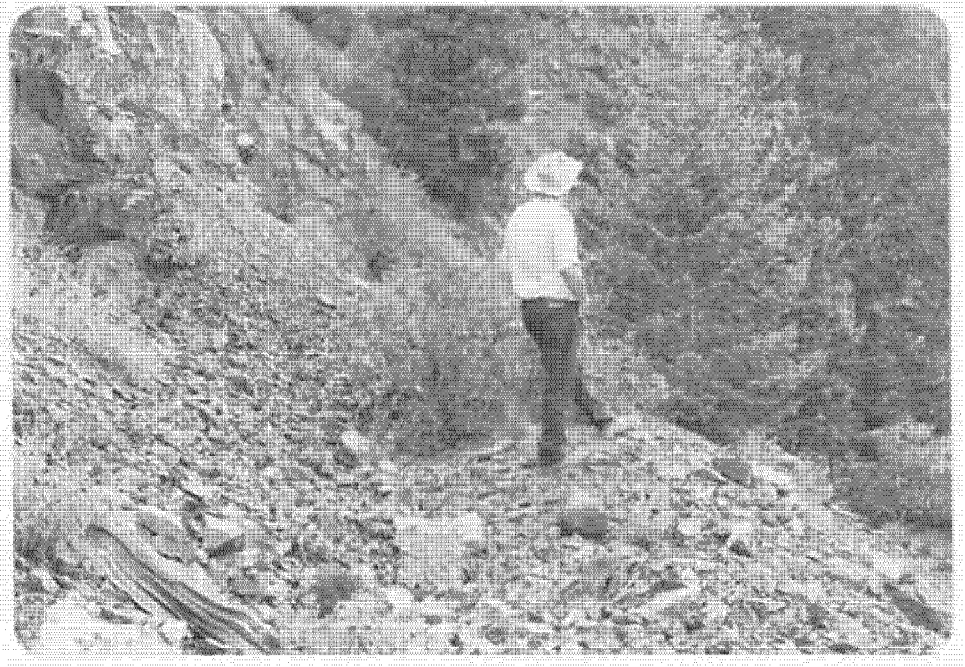


Photo (d) Big Chief, prospect pits due west of adit.

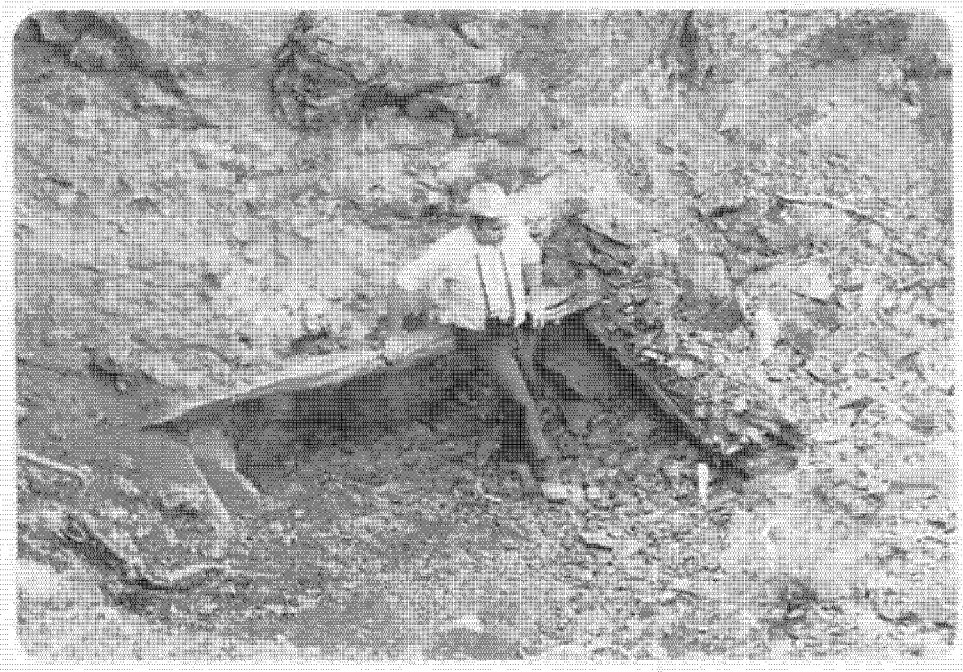


Photo (e) Big Chief, caved shaft west of prospect pits.

Photo (f) Big Chief, open cut workings downslope to north of caved shaft.

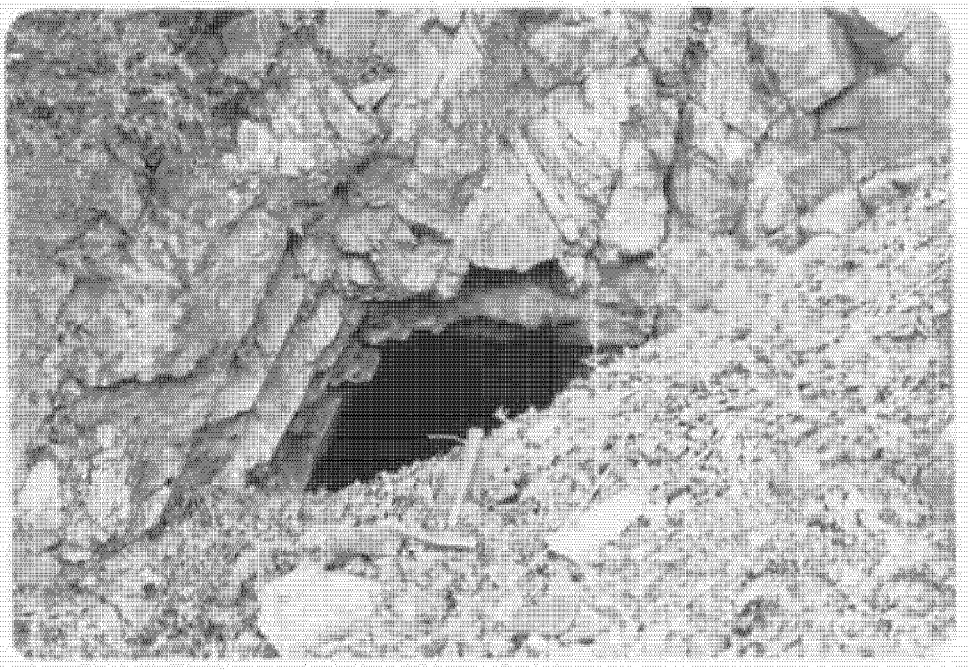


Photo (g) Big Chief lower adit to northeast of open cut.

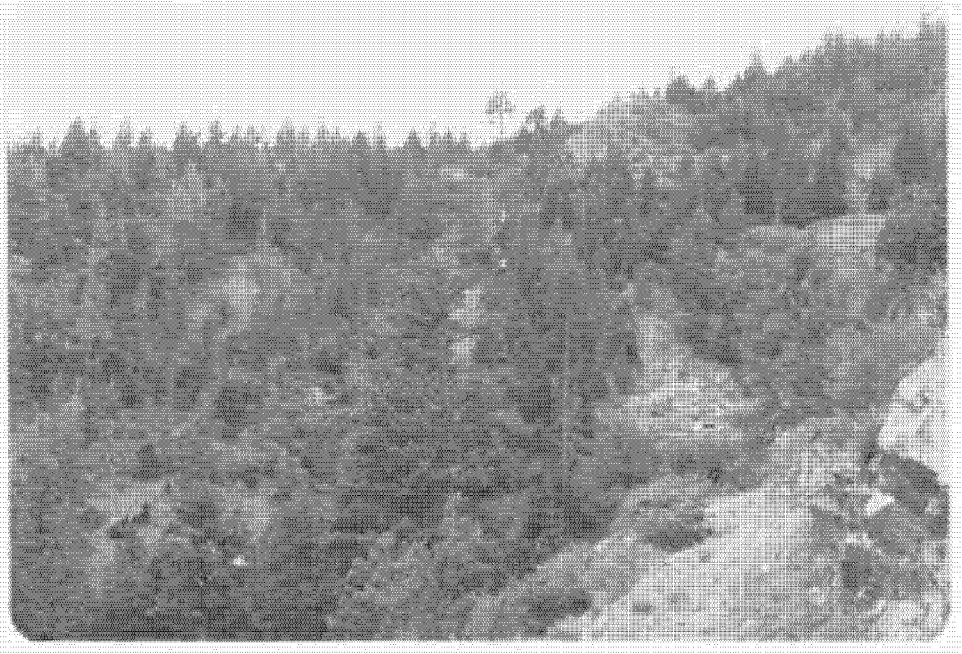


Photo (h) Ore chute (center photo) at Big Chief, conveyed ore to lower load out area.

Date Visited 10/9/80

Mine name(s) Black Copper Canyon County Taos

Section 26 (Unsurveyed) Twnsh. 28 N R. 15 E

Quadrangle Sheet Red River Pass 7½'

Mining district Red River

Elevation 9,500'

Nearest City and/or dwelling 1 mi. east of new housing development, 5 mi. southeast of Red River.

The workings are reached by proceeding southward from the town of Red River by paved road along the Red River to a dirt road at the intersection with Black Copper Canyon. The workings are 1 mile east up the canyon, at a "Y" intersection of Black Copper Creek.

Workings consist of several small prospect pits, and a shaft with three interconnecting adits. The shaft (photo a) is collapsed, but according to Schilling (1960), the shaft is approximately 300' deep, with drifts and crosscuts running off 5 levels. One adit runs off the 1st level, and two longer adits run off the 2nd level and all are open to the surface. All the adits are collapsed. A small pond and earthen works can be seen where the two longer adits began (oral communication Bob Prunty, Red River Post Office) and a stream sample was taken here (photo b). A copy of the water analysis is attached. Although the shaft is collapsed, remains of the draw works and a 5 stamp mill (photo c) remain. A dump (photo d) extends south from the workings into the Black Copper Creek Canyon. Dimensions of the dump are 40' from hoist area to creek bed, and 50' east-west, along the creek bed. Maximum height from creek bed to the top of the dump is about 35-40'. Scintillometer readings taken on the dump were less then 100 CPS. Forty feet east of the main shaft is the discovery adit (photo e) (Schilling, 1960). The adit strikes N67°W, is 4' wide and 6' high. Minimum depth appears to be 20'.

A number of small exploration holes and diggings were found east of the main working; photo f shows the beginning of a small adit 130 yards east of the mine dump, and 40' upslope from the creek bed. Photo g is a small shaft, 6 x 6 x 12' deep on the southside of the stream.

The mineralization appears to be associated with a set of shear zones which range in strike from N65-70°W. The shear zone is well exposed in the discovery adit in photo e. Drusy quartz and some pyrite can be seen coating the shears at the adit entrance. Schilling (1960) notes the occurrence of galena, chalcopyrite, sphalerite, and chalcocite in the shear zone as well, and some of these minerals could be seen on the dump, although none were seen at the adit entrance. No mention of uranium mineralization has been given in the literature.

The host rock is Precambrian granite gneiss (Clark & Read, 1972). A series of diabase dikes striking N10-15°E are exposed 300' NE of the shaft.

(turn)

T2-1

TAOS COUNTY

Quad: Red River Pass 7½'

1. NM-39-1-1 Page 1

Black Copper Canyon

Quad: Trampas 7½'

1. NM-85-1-1 Page 6

Wichita (Tungsten) Mine

References: (1) Clark, R. F., and Read, C. B., 1972, Geology and Ore Deposits of Eagle Nest Area, New Mexico, N.M.B.M. Bull. 94, p. 110, pl. 1.
(2) Schilling, John H., 1960, Mineral Resources of Taos County, New Mexico, N.M.B.M. Bull. 71, p. 124.
(3) Oral communication with Bob Prunty, U.S. Post Office, Red River, New Mexico.

Analysis of Black Copper Canyon

prospect water sample

pH	TDS	Conductivity	Fe	Cu	SO_4
7.4	171 ppm	230 umho	0.52 ppm	<.05 ppm	<25 pp

Ta-2

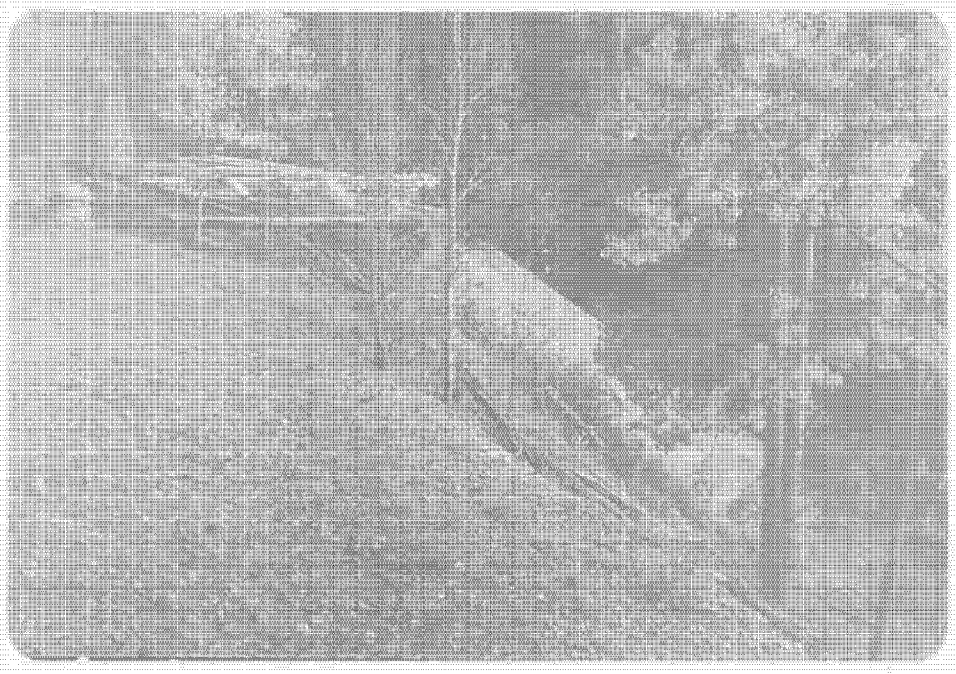


Photo (a) Collapsed shaft at Black Copper Canyon.

Photo (b) Stream sample taken at the west end of Black Copper Canyon workings.

Photo (c) Stamp mill west of the Black Copper Canyon shaft.

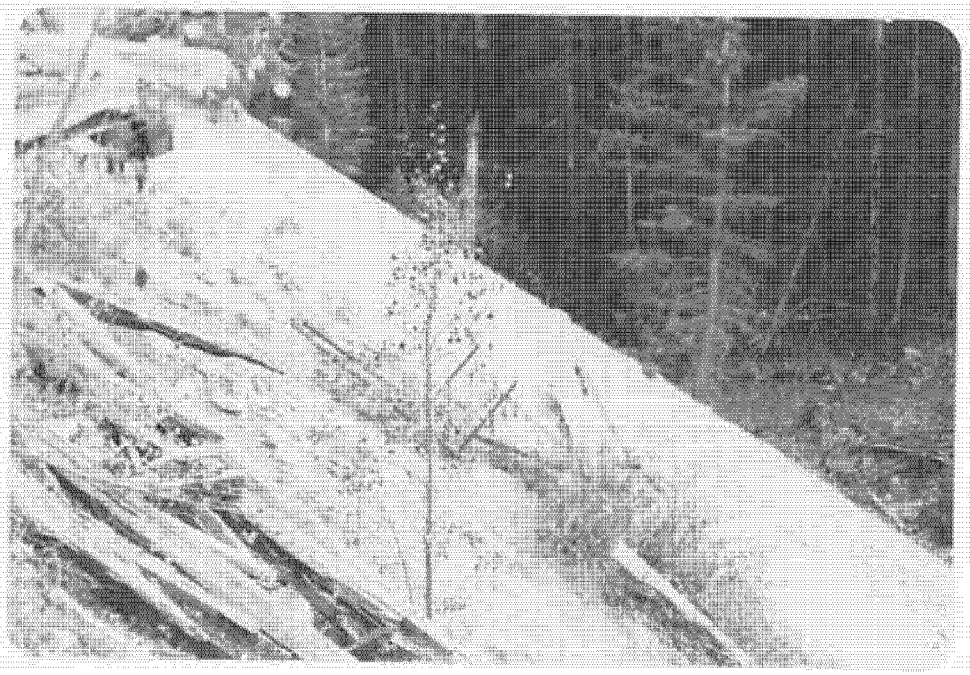


Photo (d) Dump below the Black Copper Canyon shaft.

Tab 4

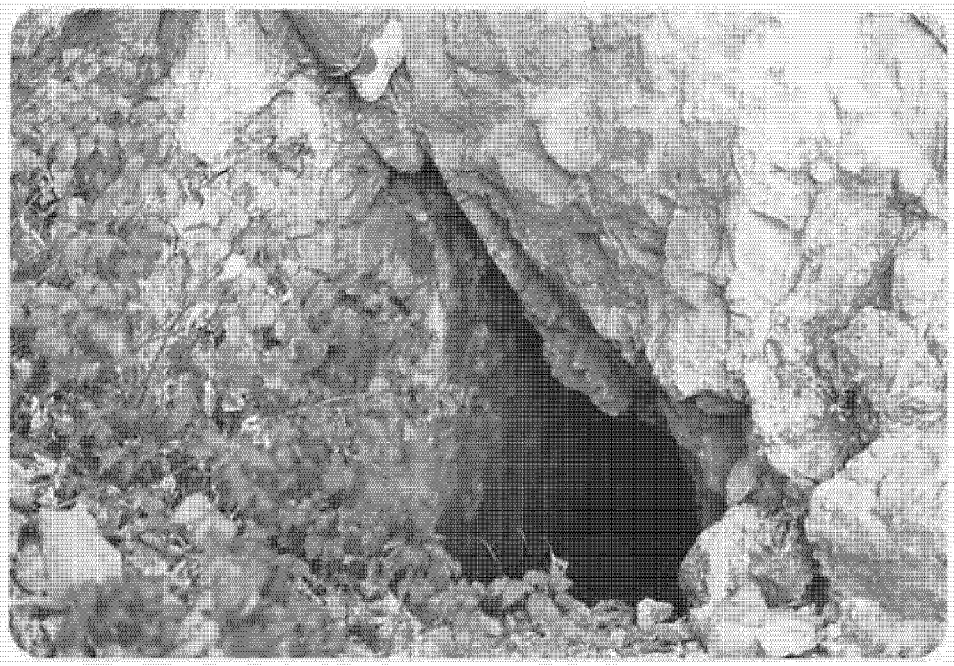


Photo (e) Discovery adit of the Black Copper mine.

Photo (f) Beginnings of small adit east of the main dump.

Ta-5

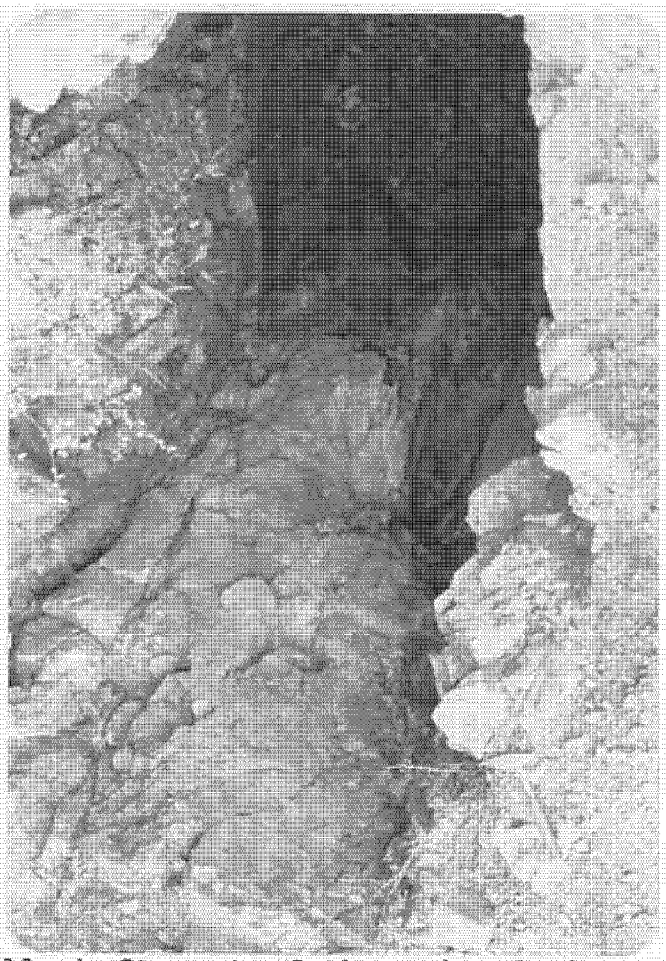


Photo (g) Small shaft east of the main Black Copper workings.

Date visited 10/11/80

Mine name(s) Wichita (Tungsten) Mine County Taos

Section N1/2SE1/4 16 Twnsh. 23N R. 11E

Quadrangle sheet Trampas

Mining district Picuris (Copper Hill)

Elevation 8,130'

Nearest city and/or dwellings 6 miles NW of Penasco, 5 miles E of Apodaca

The Wichita Mines is located on an eastward trending ridge extending outward from Copper Mountain. A jeep trail reaches the deposit from the west.

Workings consist of two shafts and small prospect pits, as indicated on the Trampas sheet. The main adit is the northernmost (photo a). The shaft is 6' x 8' at the surface, narrowing to 4' x 6' due to collapse. According to Schilling (1960), the shaft is 100' deep. The collar is timbered, but has been burned and is beginning to collapse into the shaft. A series of dumps (photo a) extend outward to the west on the western side of the shaft. The dumps are 100' E-W x 350' N-S at their maximum dimensions, and are fan shaped from the adit outward. Average thickness is approximately 4-5'. A small cabin, 15' x 22' is located just to the west of the shaft (photo b). 400' south of the main shaft is the second shaft. Its dimensions are 6' x 10' x 10' deep (photo c).

The Champion Copper Co. produced some tungsten ore during World War I (Schilling, 1960). In 1955, 6 tons of tungsten were mined and the name changed to tungsten (Schilling, 1960).

The main shaft is sunk in meta quartzite and vein quartz of the Precambrian Ortega formation (Schilling, 1960). The vein is iron stained and contains tourmaline, chrysocolla and malachite. The tungsten mineral is wolframite. No visible uranium mineralization.

References

(1) Schilling, John H., 1960, Mineral Resources of Taos County, New Mexico, N.M.B.M. Bull. 71, p. 103.
(2) New Mexico State Mine Inspectors Office.
(3) U.S. AEC, Uranium Mines Records-New Mexico.

Ta-7

Photo (a) Wichita adit and Dump. Note hammer (circled) for scale.

Photo (b) Cabin at the Wichita Mine.

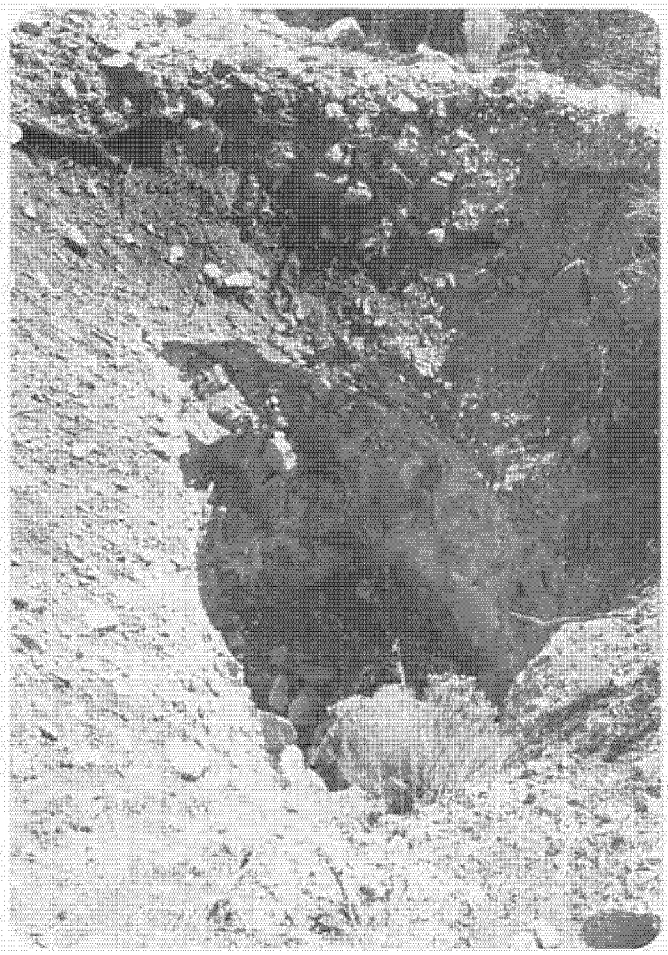


Photo (c) Typical small pit on the Wichita workings. Dimensions are 6' wide, x 10' long, x 10' deep.

Ta-9

TORRANCE COUNTY

Quad: Torreon 15'

1. NM-227-1-1 Page 1

Copper Girl

Date visited 5/8/80

Mine name(s) Copper Girl County Torrance

Section NW¼ 28 Twnsh, 4 N R. 5 E

Quadrangle sheet Torreon 15'

Mining district Scholles

Elevation 6,820'

Nearest city and/or dwellings Scholle, 9 miles south

The Copper Girl is located in the NW¼ of sec. 28 on the east bank of Priest Canyon, at the northern end of the Scholles Mining District. The tailings cone is visible from the forest service road which passes ¼ mile to the west of the mine. To reach the mine site travel northward on Priest Canyon road for 9 miles from the point where it leaves U.S. 60 1 mile west of Scholle. The last ¼ mile up the slope to the east must be made on foot as no access road exists.

The mine consists of a small adit, 6' high, 6' wide, now partially blocked by caving (see photos a & b). Adit is driven eastward in a light gray sandy mudstone of the Abo Formation; it is at least 12-15' long, untimbered, and shows evidence of some roof falls about 10' back. A thin bed of coarse grained conglomeratic arkosic channel sandstone crops out just below the adit entrance. This sand unit contains an appreciable amount of copper locally, with malachite and azurite present at this site, and also produces the highest scintillometer response of any rock type on the dump or at the outcrop; readings of up to 225 cps were recorded. Readings of just over 150 cps were recorded at the portal. No uranium mineralization is visible.

Another small adit was started 50' south of the main adit, but no underground workings exist at present. Several rounds were apparently set off and the stub adit was completely caved. Scintillometer response here was weak, less than 2x background.

The small dump from the main adit is about 40' wide (N-S) and extends westward down slope for approximately 50' at the angle of repose (see photo c). It is visible because of its light gray color contrasting with the generally reddish brown outcrops.

The mine is in a red bed copper deposit; the uranium mineralization is below ore grade. However, Lovering, 1956, stated that high grade uranium deposits occur in the Scholles district in T 2 N., R. 5 E about 3 miles north of Scholle in Torrance County.

The Meader Corporation had the Copper Girl registered with the State Mine Inspector's Office in 1956. Uranium ore production, if any, is unknown.

turn

10-1

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Lovering, T. G., 1956, Radioactive Deposits in New Mexico, U.S.G.S., Bull. 1009-L; p. 372.
(3) Field notes, 5/8/80.

To-2

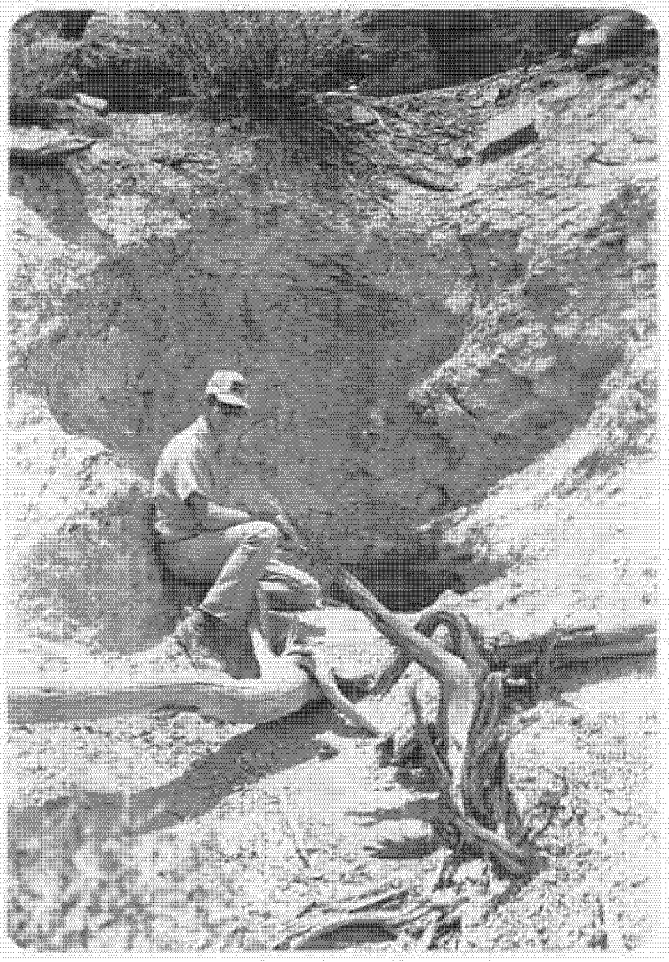


Photo (a) Looking eastward into partially caved adit on the Copper Girl Claim.

Photo (b) Copper Girl adit, same as in (a); opening is large enough for a man to enter.

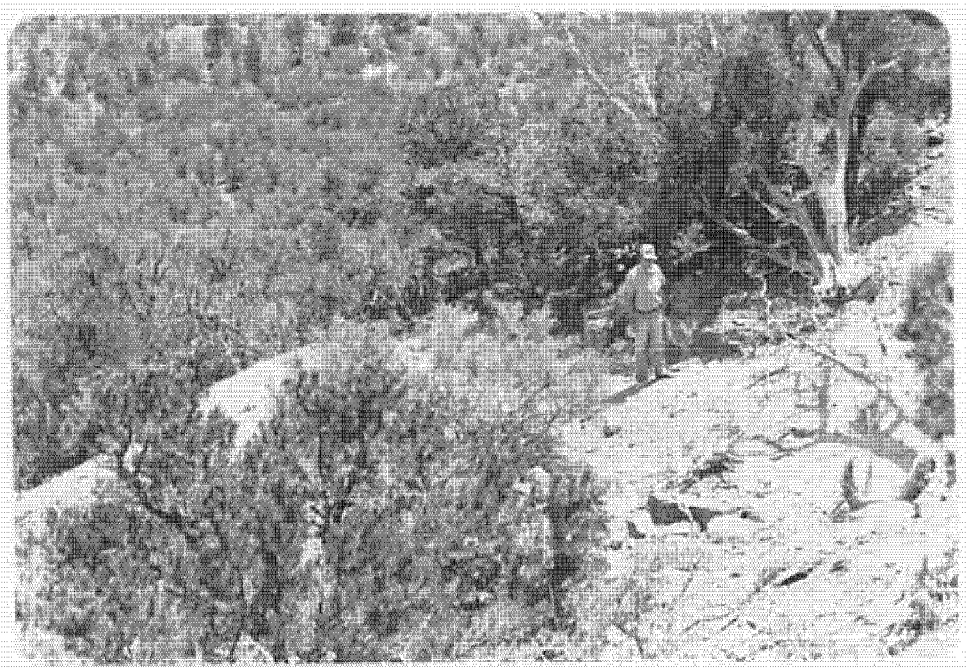


Photo (c) Looking downslope from mine entrance to tailings dump; dump extends downslope for 50'-60'.

VALENCIA COUNTY

Quad: Dos Lomas 7½'

Quad: Dough Mountain 7½'

Quad: Grants 7½'

Quad: Mesa Gigante 7½'

Quad: Moquino 7½'

Quad: San Mateo 7½'

Quad: South Butte 7½'

Paisano Prospect

Date visited 2/1/80

Mine name(s) Double Jerry (Vallejo) County Valencia (McKinley)

Section NW¼ 3 Twnsh. 12 N R. 9 W

Quadrangle sheet Dos Lomas

Mining district Grants

Elevation 6,980'

Nearest city and/or dwellings

The Double Jerry is located in sec. 3 of T. 12 N., R. 9 W., in Valencia Co., however, the portal is in the SW¼ sec. 34 of T. 13 N., R. 9 W., in McKinley Co. Most references have listed the mine as being in Valencia Co.

The mine is accessible via the Roundy Ranch road which leaves state highway no. 53 7.3 mi. north of the no. 53 and no. 66 junction at Milan. Travel northeastward on the ranch road, staying left at all road forks until ascending the mesa in section 4. In the middle of sec. 4 turn left again and follow trail northward across drainage line to sec. 4/sec. 33 fence line, then right to U.S. Forest Service gate. Pass through gate and follow road approximately 1/2 mi. to mine which is very near the southern line of sec. 34.

The workings consist of a 600' long, 20° incline (inclined adit) driven into Todilto limestone. The 12' x 12' timber head frame and load out and the 12' x 16' wooden shack that housed the hoist remain at the site (see photos a & b). The portal is about 6' high x 8' wide and timbered; incline was tracked and timbered. Caving has exposed the first 25' of the incline and 100' back from the portal a 20' diameter hole has caved through to the incline (see photo c). Also shown in the photo is a small drainage line that passes immediately behind the caved area and across the top of the incline. All mine timbering is in poor condition and the site could be considered slightly hazardous. Scintillometer readings in the area of the portal and loadout facility range from 350-600 cps, or up to 9 x background. A small powder magazine is visible on the slope about 300' southwest of the mine.

The mine was opened in 1957 and operated by Vallejo Uranium Mines Inc., until it closed in 1962. By late 1958 it had produced about 1,600 tons of high lime, low vanadium ore that averaged .21% U_3O_8. Total production is not known.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium Section, in, Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87, p. 215.
(3) U.S. A.E.C., 1959, Mine Operation Data Report, AEC-PED-1.
(4) Field notes, 2/1/80.

V-1

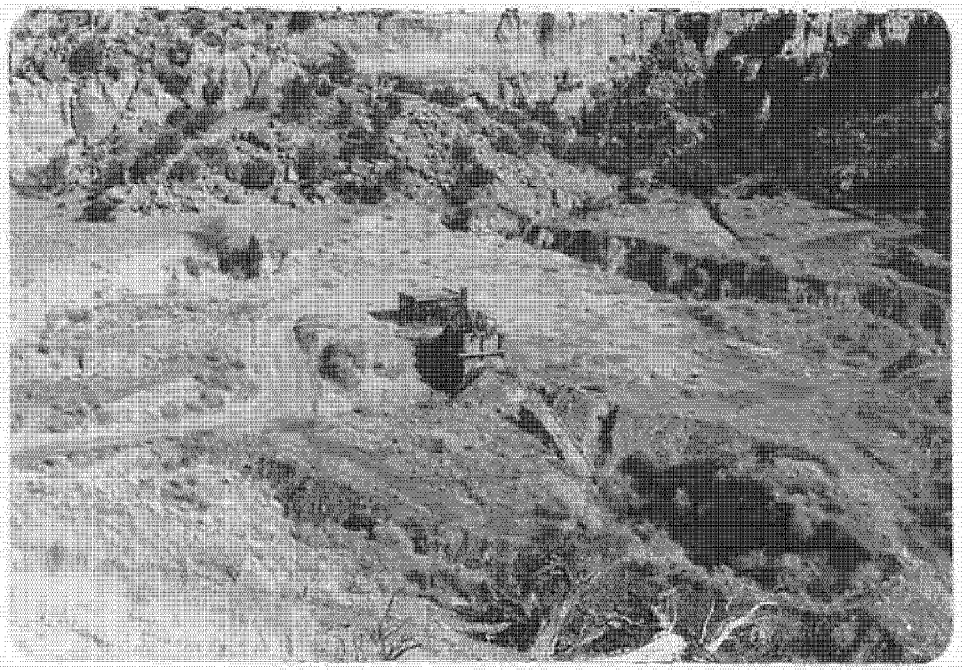


Photo (a) View northeastward of Double Jerry Mine.

Photo (b) View northward of timbered incline and the headframe and loadout, from drainage line; range pole is on narrow divide between drainage line and caved area over the incline.

Photo (c) View southward showing the mine dump on the left, the portal and caved area behind, and the small drainage line on the right.

Date visited 2/1/80

Mine name(s) Christmas Day County Valencia

Section NE¼ Sec. 4 Twnsh. 12 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,000'

Nearest city and/or dwellings Milan, 9 miles south

The Christmas Day Mine is located in the SE¼, NE¼ of sec. 4 immediately west of the Red Bluff #9 claim, see Fig. 1. To reach the mine area travel north on highway no. 53 for 7.3 miles from the no. 53 and U.S. no. 66 intersection. Then take the Roundy Ranch road northeastward for about 3 miles to the top of the mesa in sec. 4.

The mine consists of a more or less C-shaped trench, open to the north, with a 60' radius, (see photo a). The trench is up to 20' deep, but only the bottom 5' to 6' is in Todilto limestone, the remainder is aeolian overburden. The western arc or limb is the longest and widest and provided the access to the pit (see photo b). The tailings dump area is located 300' directly out from the access ramp and is shown in photo (c). Dump is 120' in maximum dimension, and up to 6' high; some secondary mineralization noted on the dump rock, scintillometer readings up to 700 cps.

The workings exploited a cluster of small to medium deposits in the lower Todilto, that trend northeasterly through the area, ranging from a few feet to 200' wide (Hilpert, 1969). Mineralization is associated with fractures and low amplitude intraformational folds. Scintillometer readings were in the 500-700 cps range; a trace of yellow secondary uranium mineralization was noted in places. Trenches are filling with tumbleweed and blow sand (see again photo a) and floors have developed vegetation cover.

Mine was operated from 1954 to 1956 (Hilpert, 1969), but last registration at State Mine Inspector's Office was in August, 1954., by the Colamer Corporation.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 58.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) McLaughlin, E. D., Jr., 1963, Uranium Deposits in the Todilto Limestone of the Grants District, in Geology and Technology of the Grants Mineral Region: New Mexico Bureau of Mines and Mineral Resources, Memoir 15, p. 147.
(4) Field notes, 2/1/80.

V-4

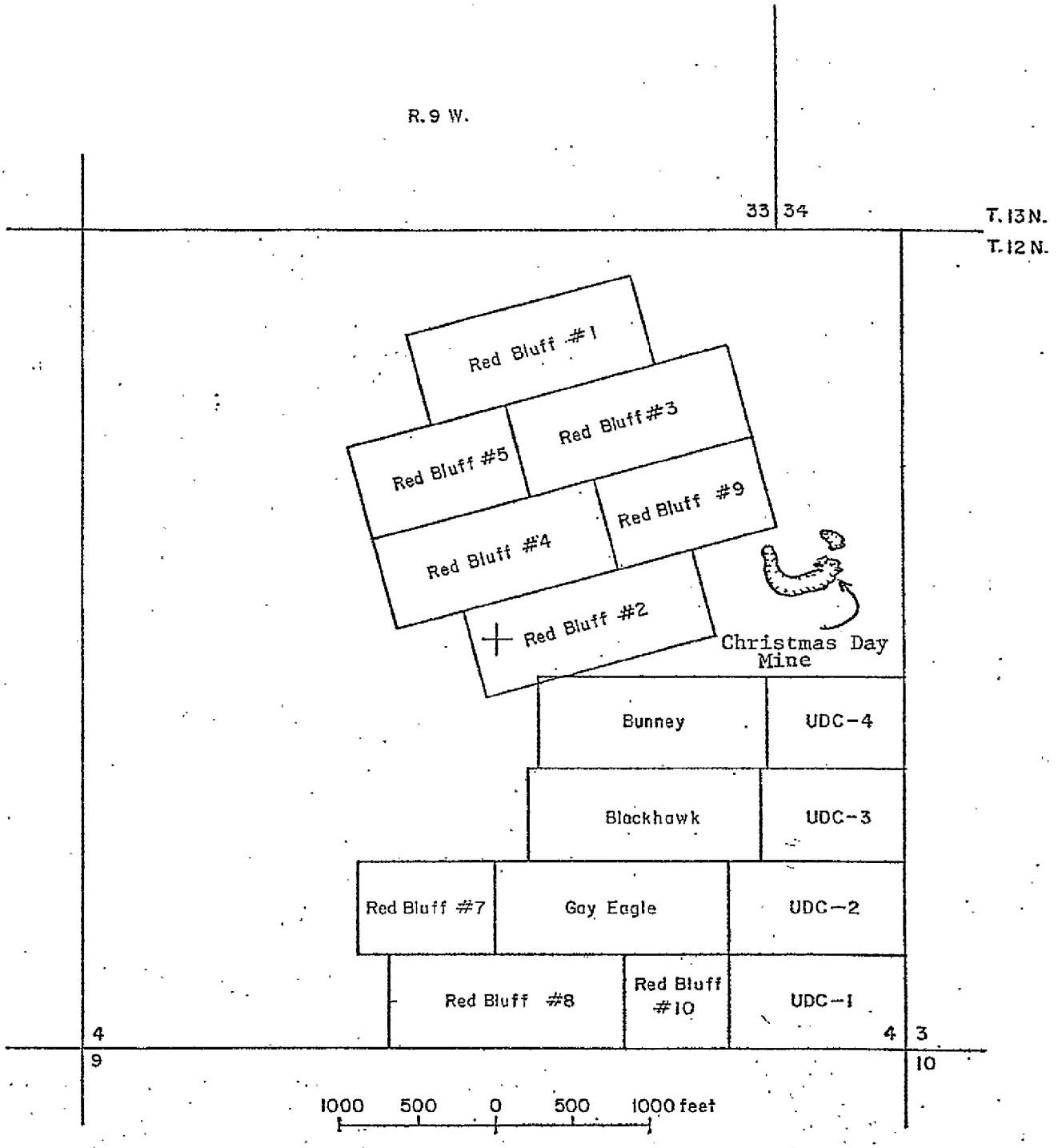


Fig. 1 Sec. 4 mining claims filed in late 1950 and early 1951 (source: mining claim records, Valencia Co., Courthouse). Note the Christmas Day Mine in the SE¼ NE¼ sec. 4, just east of Red Bluff #9.

V-5

Photo (a) Looking westward into the east and south edges of the Christmas Day workings; blanket of aeolian sediment is here quite thick, often over 15'.

Photo (b) Looking northwestward into the western limb of the Christmas Day workings.

Photo (c) Looking northwestward at Christmas Day tailings dump area. —Note person in photo for scale.

Date visited 2/1/80

Mine name(s) Red Bluff Claims 1, 2, 3, 4, 5, 9 County Valencia

Section N½ Sec. 4 Twnsh. 12 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 6,975'

Nearest city and/or dwellings Milan, about 9 miles south. Roundy Ranch is 1½ miles southwest, but is not inhabited continuously

The Red Bluff Claims #1-5, and #9 are located in the N½ of sec. 4 (claim #2 extends into the south ½) as shown in Fig. 1. The claims may be reached by traveling north on highway no. 53 for 7.3 miles from the intersection no. 53 and U.S. no. 66. Then take the Roundy Ranch road northeastward for approximately 3 miles to the top of the mesa in sec. 4.

The workings consist of small open cuts and trenches in Todilto limestone. There is an overlying blanket of aeolian sand that generally varies from less than 1' to 10' thick. The deposits are associated with fractures and intraformational folds, however, the folding is more apparent in the workings in the southern half of the section. Claims #1, 2, and 4 have the largest workings and the only ones with trenches longer than 100'; in addition claim #2 has perhaps the only underground workings of the group in the form of a 20' long adit. Photographs (a) through (f) illustrate the more significant disturbed areas on these claims.

Primary unoxidized minerals that have been identified are uraninite, coffinite, paramontrosite, haggite, and fluorite (Hilpert, 1969). Most of the uraniferous deposits in the Todilto fm. are at or near the surface and so have been oxidized. This oxidation produces the common, conspicuous, yellow to yellow green encrustation of the secondary minerals tyuyamunite, metatyuamunite, uranophane, and less commonly carnotite. If the secondary minerals are present scintillometer readings will generally be 1,000 cps or more. Claims #1 and #4 both had areas that gave scintillometer responses of 1,000 cps.

A sample of water taken from the pond shown on photo (c), (Red Bluff #4) was analyzed and the results are shown in Table 1.

Table 1

			Total dissolved, in ppm				
Sample	Conductivity mmho/cm	pH	Fe	U_3O_8	Se	SO_4	
Red Bluff #4 Pond Water	250	8	>.1	.012	>.005	27	

V-8

The claims were filed in 1950 and 1951 and were worked between 1952 and 1956, however, some were registered with the State Mine Inspector's Office as late as 1964 and 1965. In September, 1976 one James Achen staked the ACRI claims no. 6 thru 8 in the NE¼ of sec. 4. The claims were the standard 600' x 1,500' dimension, and extended from the east section line 1,500' westward. As such they would overlap the Red Bluff group, which were never patented.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. paper 603.
(2) Lovering, T. G., 1956, Radioactive Deposits in New Mexico; U.S.G.S., Bull. 1009-L, p. 376.
(3) Mining Claim Records, Valencia County Courthouse.
(4) Field notes, 2/1/80.

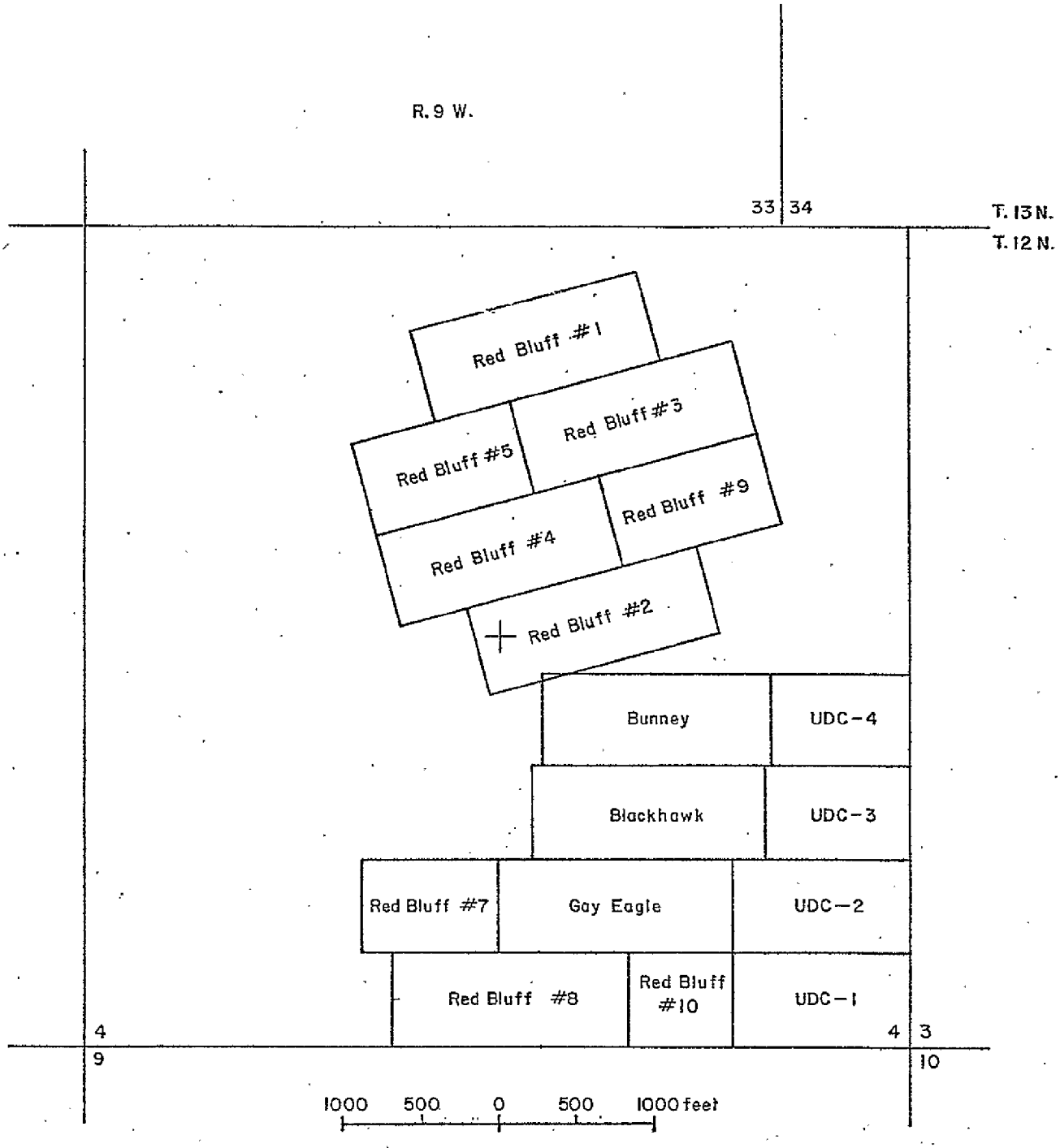


Fig. 1 Sec. 4 mining claims filed in late 1950 and early 1951 (source: mining claim records, Valencia Co., Courthouse).

V-10

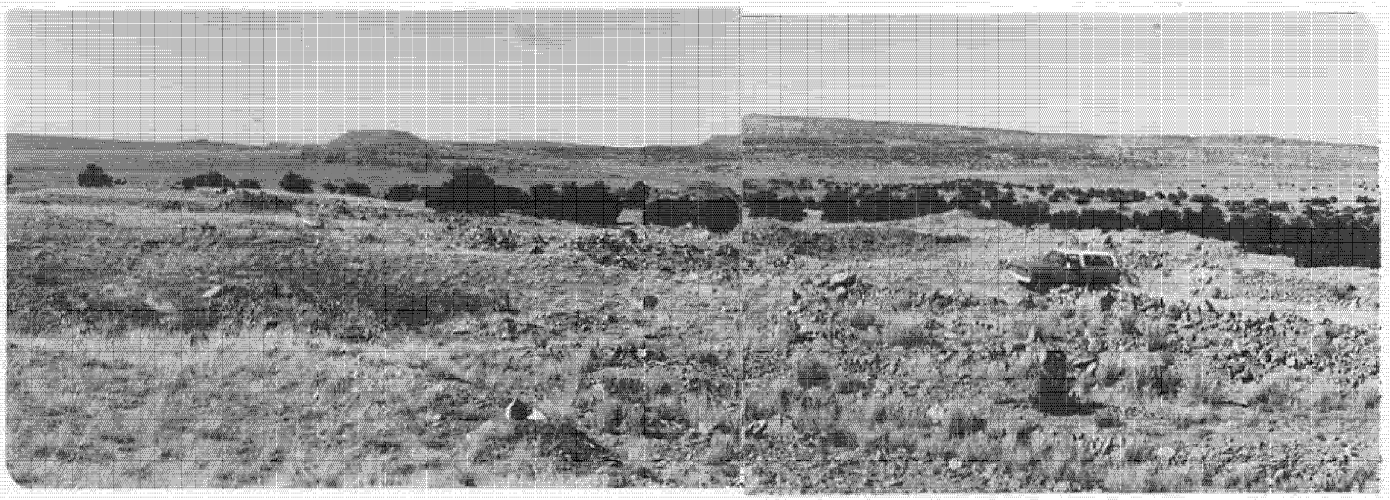


Photo (a) View northwestward on Red Bluff #1 Claim; Haystack Mtn., at left in background. A close-up of one of the main cuts is shown in next photo.

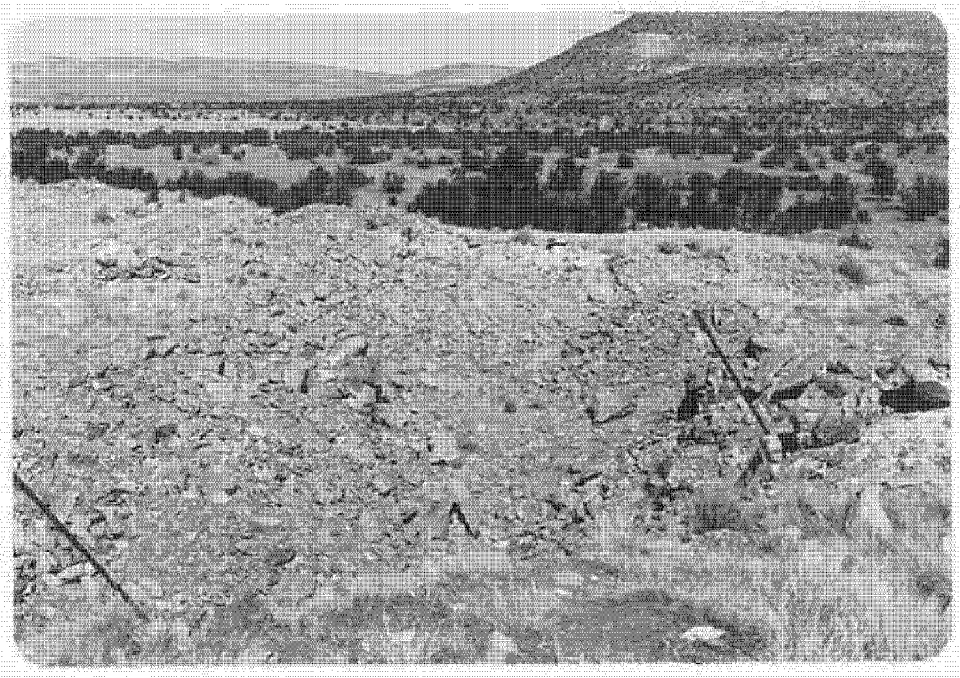


Photo (b) Looking northward into a 140' long open cut on Red Bluff #1; note range pole at center photo for scale.

Photo (c) Looking west into workings near Red Bluff #4 and #5 boundary; this pit is probably on the Red Bluff #4 side. Pond is 10' wide, 25' long, and 2½' deep at maximum.

V-12

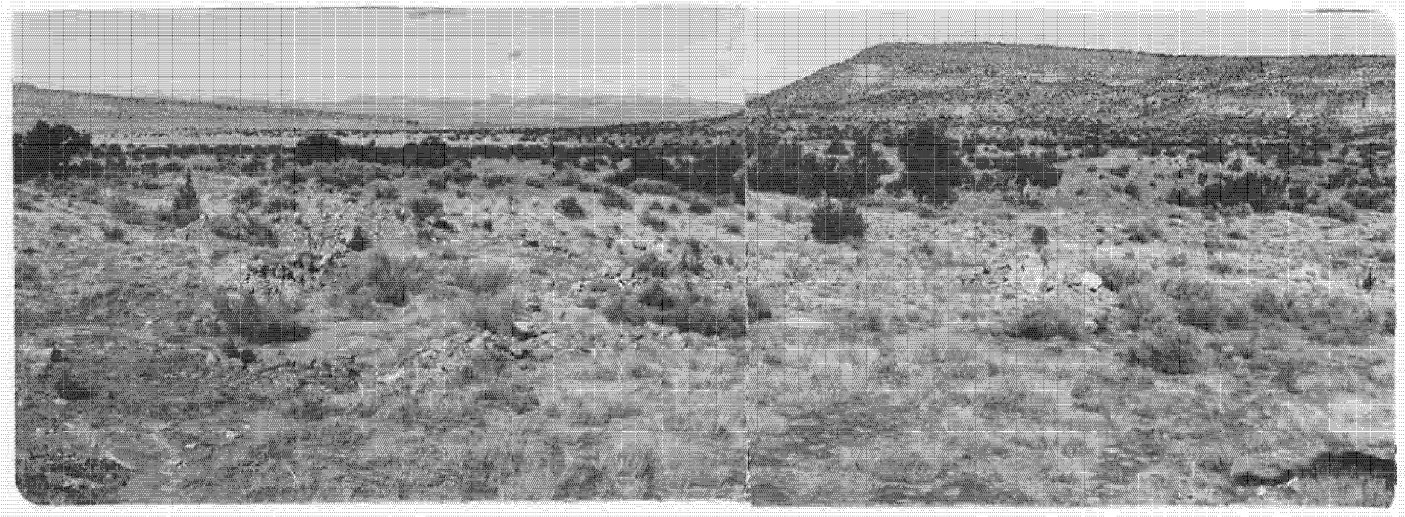


Photo (d) Looking north-northeast near the Red Bluff #3 and #9 boundary, at a series of very small open pits and trenches in Todilto limestone.

Photo (e) Looking westward into small trench near the southwest end of Red Bluff #2 Claim; small adit at other end of trench behind viewer is shown in photo (f). Note range pole left of center for scale.

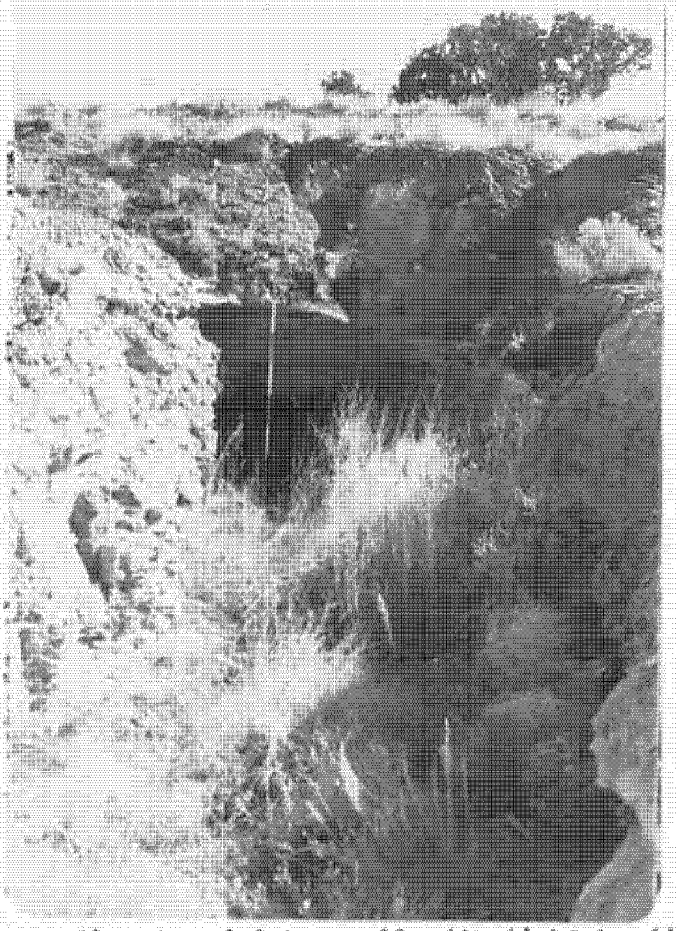


Photo (f) Looking southeastward into small adit 4' high, 6' wide, 20' long near the southwest end of the Red Bluff #2 Claim.

Date visited 3/19-21/80

Mine name(s) Black Hawk, Bunney, Gay Eagle, Red Bluff, and UDC County Valencia

Section S½ Sec. 4 Twnsh. 12 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,040'

Nearest city and/or dwellings Milan, about 9 miles south. Roundy Ranch is 1¼ miles southwest, but is not inhabited continuously.

The Black Hawk, Bunney, UDC 1-4, The Gay Eagle, and the Red Bluff Nos. 7, 8, and 10, all in the south ½ of sec. 4, are described herein, (see Fig. 1). These claims may be reached by traveling north on highway no. 53 for 7.3 miles from the intersection of no. 53 and U.S. no. 66 (2 mi. east of Milan). Then take the Roundy Ranch road northeastward for approximately 3 miles to the top of the mesa in sec. 4.

All of the workings are in the Todilto limestone; most consist of open cuts, pits, or trenches, but at least five adits were driven on the Black Hawk and Bunney Claims. These were often driven along the axis of intraformational folds and are shown in photos 1 through 4 and 6. The full lengths of the adits are not known, but are at least 40'. They appear to be stable even though the limestone is highly fractured along the folds; timbering is generally limited to the portal area. The folds locally have a northwest trend. The southern adits, photos (4) and (6) probably interconnect and one drift extends southward to connect with the open pit shown in photo (7), which is on the Black Hawk Claim. This pit exposes a thin purple fluorite vein on the bench at left foreground in photo (7). The secondary uranium minerals, tyuyamunite, metatyuyamunite, and less commonly, carnotite, were noted on many faces and muck piles, but are not everywhere present. Waste rock piles are numerous along the margins of the cuts, but a particularly large dump exists at the head of a small canyon several hundred feet west of the Black Hawk/Bunney workings (see photo 5). The Black Hawk and Bunney were mined together and no attempt is made to differentiate the two here.

Photos (8) through (12) show overburden, mine dumps, and open cuts here assigned to the Gay Eagle Claim. Photo (8) looks northward at overburden piles up to 20' high with a trench at center. Photos (11) and (12) show the depth and extent of a cut near the southern margin of the claim.

The Red Bluff 7, 8, and 10 workings are shown in photos (13) through (17). Some of the larger and longer cuts occur on the Red Bluff (8) and 10 claims; a discussion of reef structures exposed in one of these cuts is given in Perry (1963). No. 8 and 10 are southward continuations of the Gay Eagle and these three properties were mined together. Initial production date was 1952 and production through July 1, 1958 had totaled 39,284 tons of ore averaging .20% U_3O_8.

V-15

The operator in 1958 was listed as Floyd Sutton, Jr. The Gay Eagle was last registered with the State Mine Inspector's Office in 1959, but the Red Bluff #10 was registered as late as 1964.

Little if any disturbance was noted on the UDC 1 through 4 Claims. There may have been some minor prospecting on 1 and 2 (see again Fig. 1). The location of the UDC 5 described by Hilpert (1969) is not known.

In 1976 the Black Hawk Claim was restaked by William Coffey who renamed it the Tycoon 2; the Gay Eagle was restaked as the Tycoon 1. More recently the Tycoon 2 has been restaked by Jerome Mason of Albuquerque; he renamed it the New Black Hawk and the claim was filed on January 26, 1980.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. paper 603.
(2) Perry, Bobbie L., 1963, Limestone Reefs as an Ore Control in the Todilto Limestone of the Grants District, in Geology and Technology of the Grants Mineral Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15, p. 150.
(3) U.S. AEC PED-1, 1959, Mine Operation Data Report, GJO/AEC, p. 49. (microfiche only).
(4) State Mine Inspector's Office, inactive uranium mine file.
(5) Field notes, 3/19/80.

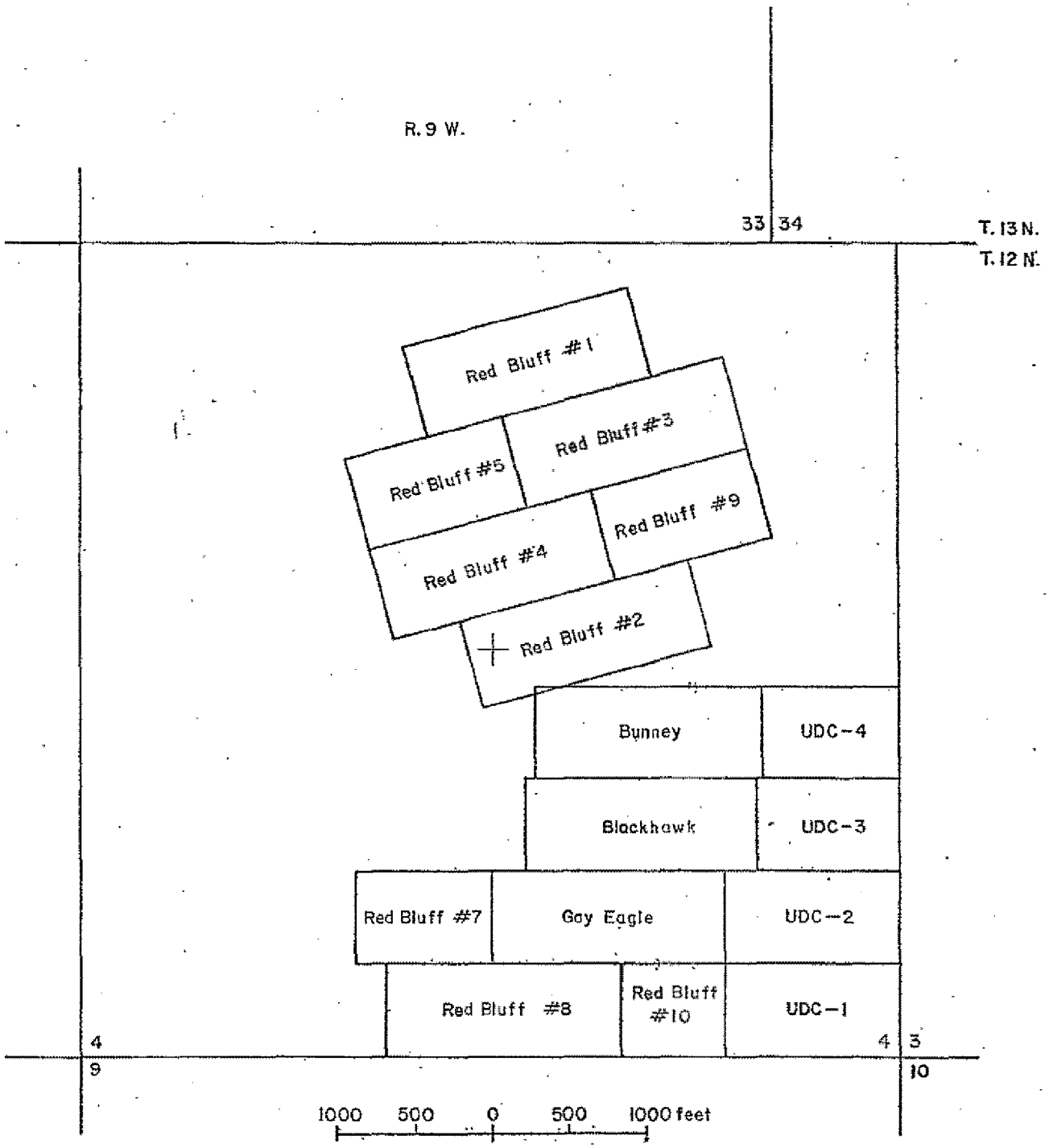


Fig. 1 Sec. 4 mining claims filed in late 1950 and early 1951 (source: mining claim records, Valencia Co., Courthouse).

Photo (1) Looking northwestward on the Black Hawk and Bunney Claims; a 10'-12' thick aeolian deposit covers the Todilto limestone. The adits are shwon in more detail in the following photos.

Photo (2) Close-up of adit shown at left in (1). Adit is 6' high at crest of chevron type fold, and 8' wide. Stub adit at right is hidden from view in (1).

V-18

Photo (3) Close-up of adit shown at far right in (1); portal is 5' high, 6' wide. Access road descends at left.

Photo (4) Looking southeastward into adit driven into end of trench shown in lower left corner of (1); portal is 5' high, 10' wide.

Photo (5) Looking northward at one of main dumps from Black Hawk and Bunney workings; waste has been bulldozed into head of small canyon which forms re-entrant in mesa top. Frontal slope is at angle of repose. Scintillometer readings on the mine dumps normally varies between 400-900 cps, occasionally higher. Note person at right for scale.

Photo (6) View from inside adit on Black Hawk Claim; portal is 6' high, 10' wide at base. A drift connects to trench at south shown below in (7).

Photo (7) Looking southward into 12' deep cut in Todilto ls., on Black Hawk Claim. Purple fluorite vein occurs on bench at left.

V-21

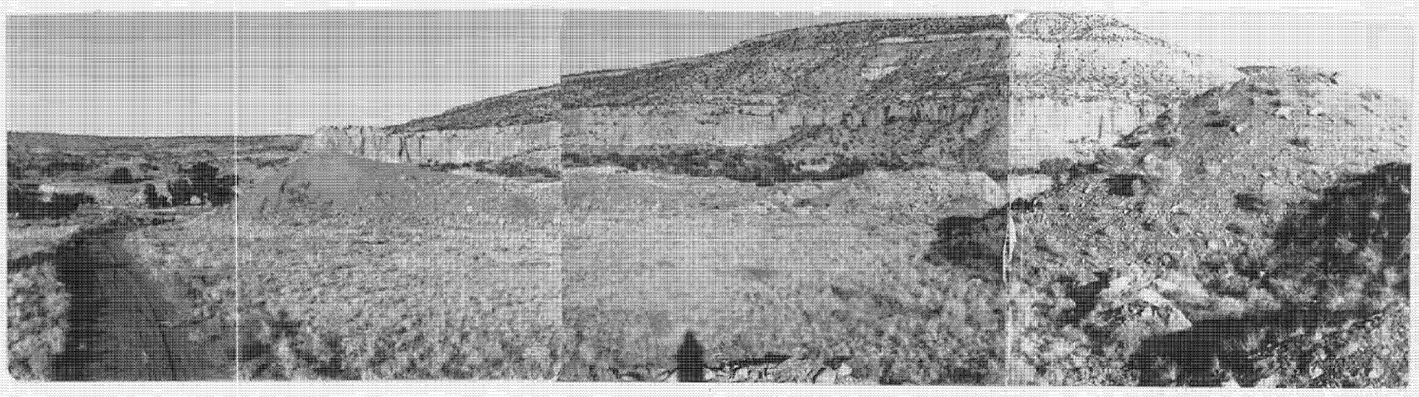


Photo (8) Looking northward on Gay Eagle Claim; overburden pile at right is 20' high (note range pole at toe of the pile); pile at left is 13' high. One of the trenches is visible at center.

Photo (9) Looking westward at 10' deep trench on Gay Eagle Claim. Trench has filled in considerably with tumbleweed and blow sand and has developed vegetative cover.

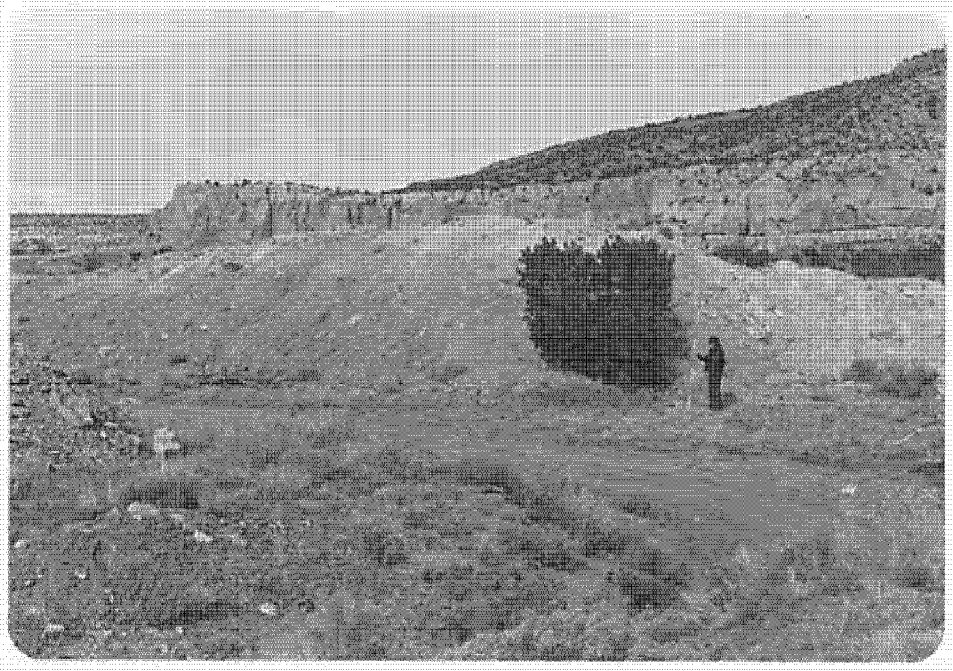


Photo (10) Looking northward at overburden pile on Gay Eagle Claim.

V-23

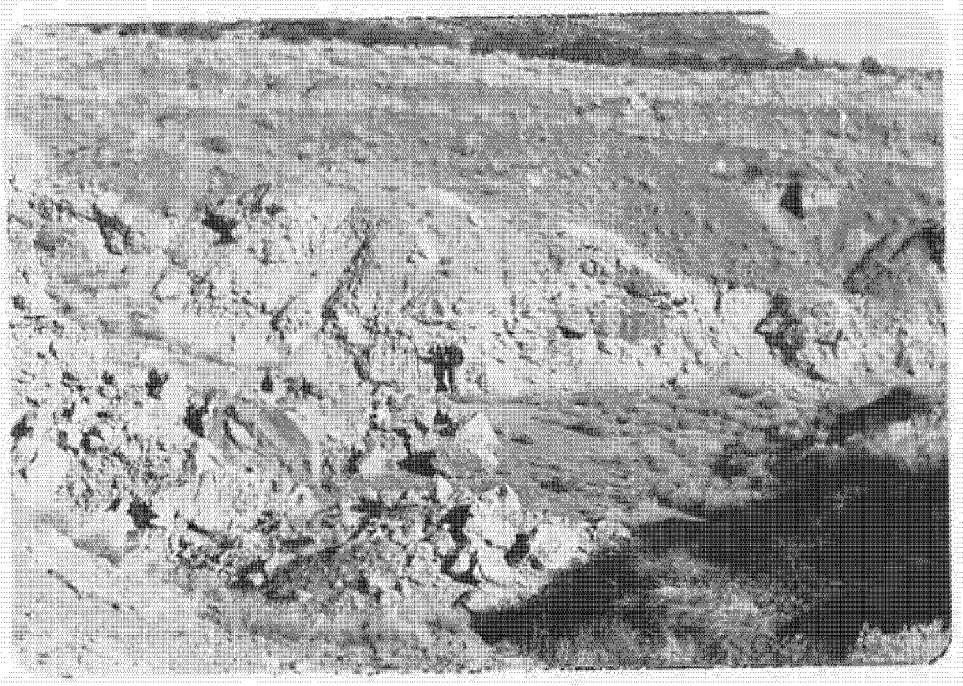


Photo (11) Looking eastward at 15' deep limestone cut on Gay Eagle Claim. Overburden is 15' thick given total depth of nearly 30'.

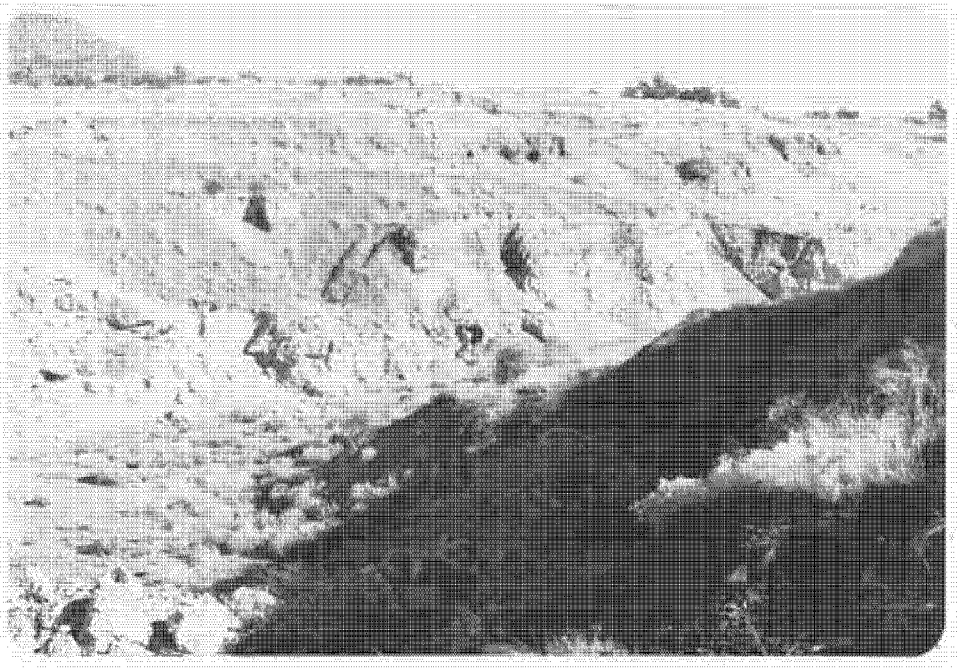


Photo (12) Southern extension of cut shown in (11) above. Road surface descends to right on bench in background. Note person in center photo for scale.

V-24

Photo (13) Looking westward into trench near west end of Red Bluff No. 7 Clain. Some back filling is evident in this area.

Photo (14) Looking southward into open cut near rim of mesa on Red Bluff No. 7 Clain; note minor fold in Todilto limestone just below person in photo. Dump from a section 9 pit is visible in background.

V-25

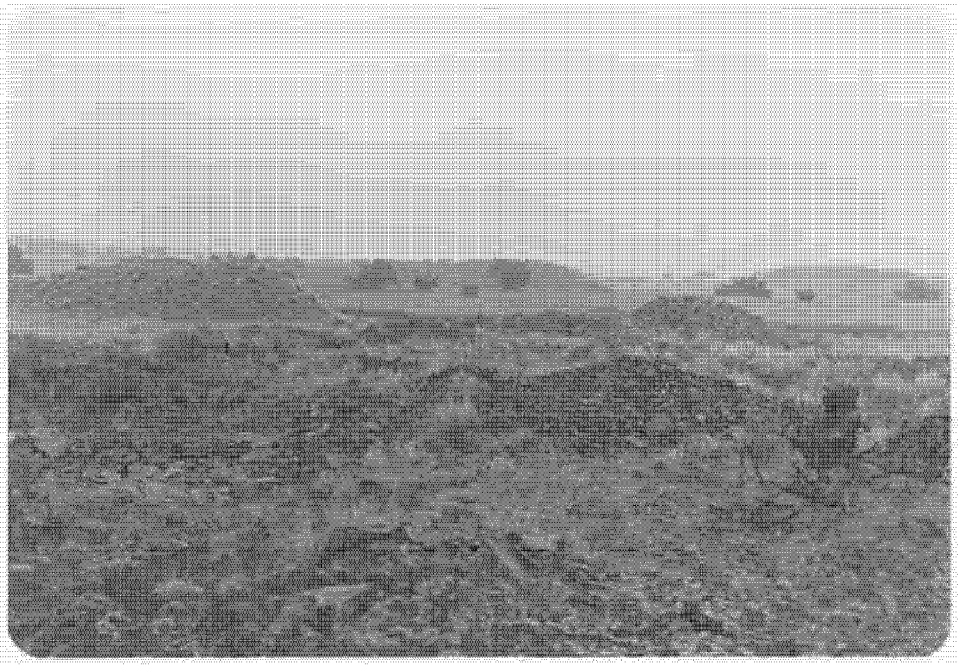


Photo (15) Looking southeastward on Red Bluff No. 8 toward the sec. 4/9 line (fence line); mine dumps in foreground, overburden pile at left. Person at right of center is standing at entrance to cut shown below in (16).

Photo (16) Looking southeast near the Red Bluff No. 8 and No. 10 boundary. Cut extends nearly 1000' east-northeast and is shown in photo (17). Fence marks the section 4/9 line. A light snow was falling at the time the photo was taken.

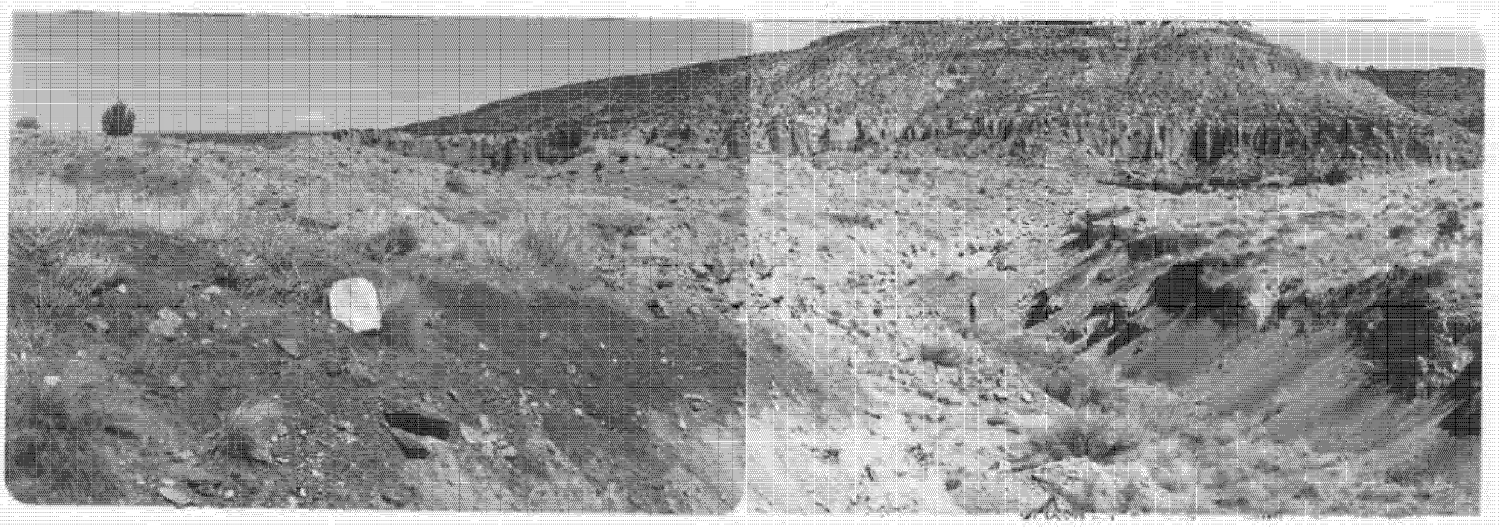


Photo (17) Looking eastward into Red Bluff #8 and 10 trench; trench extends east-northeast for 900' across the Red Bluff #10 Claim and is one of the major workings on this group of claims in the south ½ of sec. 4. Overburden has been placed largely to the north (left). This deposit is a continuation of the Gay Eagle. Note person at bottom of cut for scale.

Date visited 3/20/80

Mine name(s) Last Chance County Valencia

Section NE¼, NE¼, 8 Twnsh. 12 N R. 9 W.

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,050'

Nearest city and/or dwellings Roundy Ranch, 3/4 miles southwest but not continuously inhabited.

The Last Chance in the NE¼ NE¼ of sec. 8 is essentially a continuation of the workings in the adjoining sec. 9 Mine. It may be reached by taking the Roundy Ranch road which leads eastward off of highway no. 53 7.3 miles north of Milan (at U.S. no. 66 junction). Follow the ranch road northeastward for about 2 miles to base of cliff in sec. 8. Jeep trail up cliff or mesa face is no longer navigable and last ½ mile must be made on foot. Alternatively, continue driving north to sec. 4 and then ascend the mesa and drive back south into sec. 9, where a road to west leads to the Last Chance Mine.

The workings consist of open pits and trenches spread over an area of about 300' x 400' (see photos a through c). One south trending trench breaks through the mesa edge (photo a); the others are less well defined with much lower high walls, (photo b & c). The highest waste dump on the site is about 12' (photo d), and consists largely of unconsolidated overburden. Revegetation has been slow.

The deposit is an irregular mineralized zone in Todilto limestone (Hilpert, 1969). Maximum scintillometer readings were in 2000-2500 cps range. Secondary uranium mineralization is apparent in muck piles, waste piles, and on rock faces. Some ore was produced in the 1952-1956 period (Hilpert, 1969).

The State Mine Inspector's Office last registered the mine in June, 1956; the operator was listed as "Broaddus."

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 59.
(2) N.M. State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 3/20/80.

Addendum: Claim marker with cannister at the site shows claims were staked here October, 1977 by B. J. Bottoms.

V-28

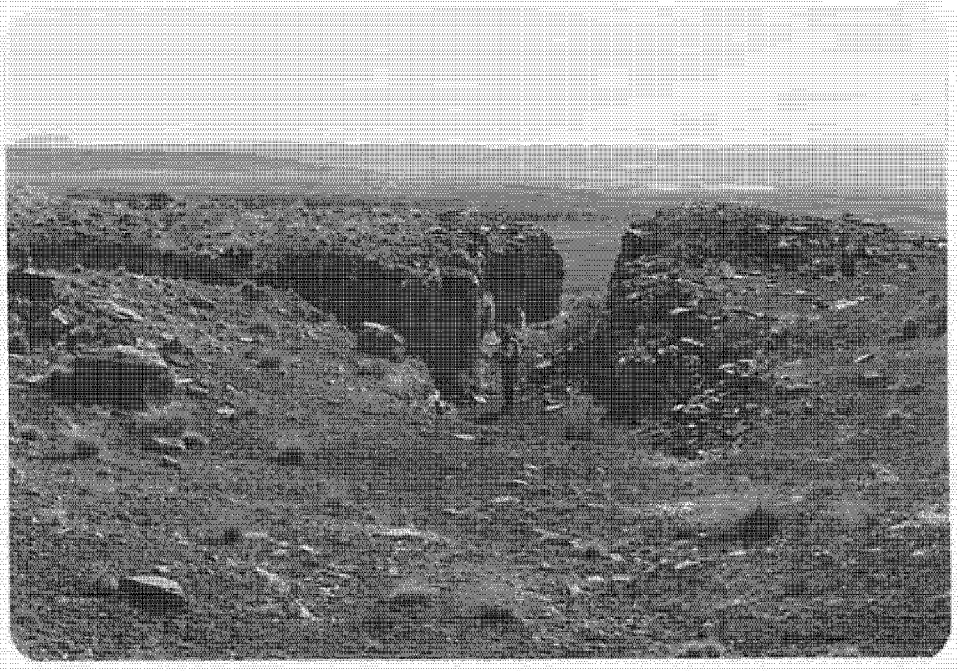


Photo (a) Looking southward at Last Chance Mine, showing 10'-12' deep trench that breaks through mesa edge.

Photo (b) Looking north at cluster of small cuts several hundred feet in from the mesa edge shown in photo (a). This cut produced the highest scintillometer readings at the site-2500 cps.

Photo (c) Looking northwestward at extensively bulldozed area at western edge of mine site.

Photo (d) Looking eastward at waste dump on east edge of mine site; waste pile is about 12' at highest point.

Date visited 3/19-20/80

Mine name(s) Section Nine County Valencia

Section 9 Twnsh. 12 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,020'

Nearest city and/or dwellings Milan, about 8 air miles south

The Section Nine Mine workings are in the north ½ of the section; several small prospect pits were noted in the SW¼. The mine may be reached by taking the Roundy Ranch road which leaves highway no. 53 at a point 7.3 miles north of the no. 53 and U.S. no. 66 junction 2 miles east of Milan. Proceed northeastward about 3 mi. on the Roundy Ranch road to the top of the mesa in sec. 4 and then take right fork and proceed southward to fence on sec. 9 line. Mine workings will be obvious at this point.

All the workings explored Todilto limestone ore bodies; they may be broken down into 3 separate areas (see sketch, Fig. 1). Going from north to south they are as follows: (1) An east-west trending cut that extends across the north ¼ corner as a continuation of the Red Bluff 8 and 10 workings. The cut is 800' long, 20' to 60' wide, and generally no more than 12' deep, (see photo a). It is interrupted by the access road shown in photo (a), but the workings continue near the section line on the west side of the road in the form of a rectangular shaped 275' x 500' stripped area with an 18' deep area quarried out in the center of it (see photo b). The waste from this center area forms a conspicuous tailings dump that extends down into the head of a small drainage in the SW¼ of sec. 4. Area (2) 600' to the south is composed of a linear cut, 750' long, 30'-50' wide, and up to 30' deep (photo c), that exposes the intraformational fold shown in photo (d). To the southeast of this cut is the "eyeball pit," a circular cut about 400' in diameter and 30' deep with a Todilto limestone knob in the center (see photo e). Fluorite was noted on the south side of the limestone knob. Ferry (1963) has discussed the "eyeball pit" in relation to the reef structures in the area. West of the eyeball 600' is a "C" shaped cut, 250' in diameter, open to the west; it is up to 25' deep and up to 50' wide (see photo f and g). Waste piles are of two types; unconsolidated sandy overburden material which are smooth and rounded and largely revegetated, and limestone tailings which are not revegetated.

Area (3) is nearly 1000' west of area 2 (see Fig. 1), but there are minor prospecting pits and trenches in between. This area probably produced the highest grade ore based on the scintillometer response. The major workings consist of a northwest trending linear cut, photo (h), 500' long, 50' wide with a road on one side, and a west trending linear cut immediately to southwest with an adit at the west end, photos (i) and (j). The cut leading to the adit is 325' long, 50' wide at maximum, and 10' deep. The portal is 6' high, 7' wide and timbered (photo j); 85' into the adit it forks into two drifts, total length is not known. Adit is not ventillated and radiation levels are very high; scintillometer readings at 20' inside adit went off scale in excess of 10,000 cps. A radon gas build up may have occurred since workings were abandoned.

V-31

A portion of the Section Nine Mine went into production in late 1950. By mid 1958 it had produced a total of 57,085 tons of ore averaging .14% (AEC PED-1, 1959). It was operated by the Anaconda Corporation until 1962 (Hilpert, 1969), however, last registration with the State Mine Inspector's Office was in September, 1960.

Several areas on this mine complex might constitute a hazard.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Perry, Bobbie L., 1963, Limestone Reefs as an Ore Control in the Todilto Limestone of the Grants District, in Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Memoir 15, p. 150.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) U.S. AEC-PED-1, 1959, Mine Operation Data Report; GJO/AEC, p. 50 (microfiche only).
(5) Field notes, 3/20/80.

V-20

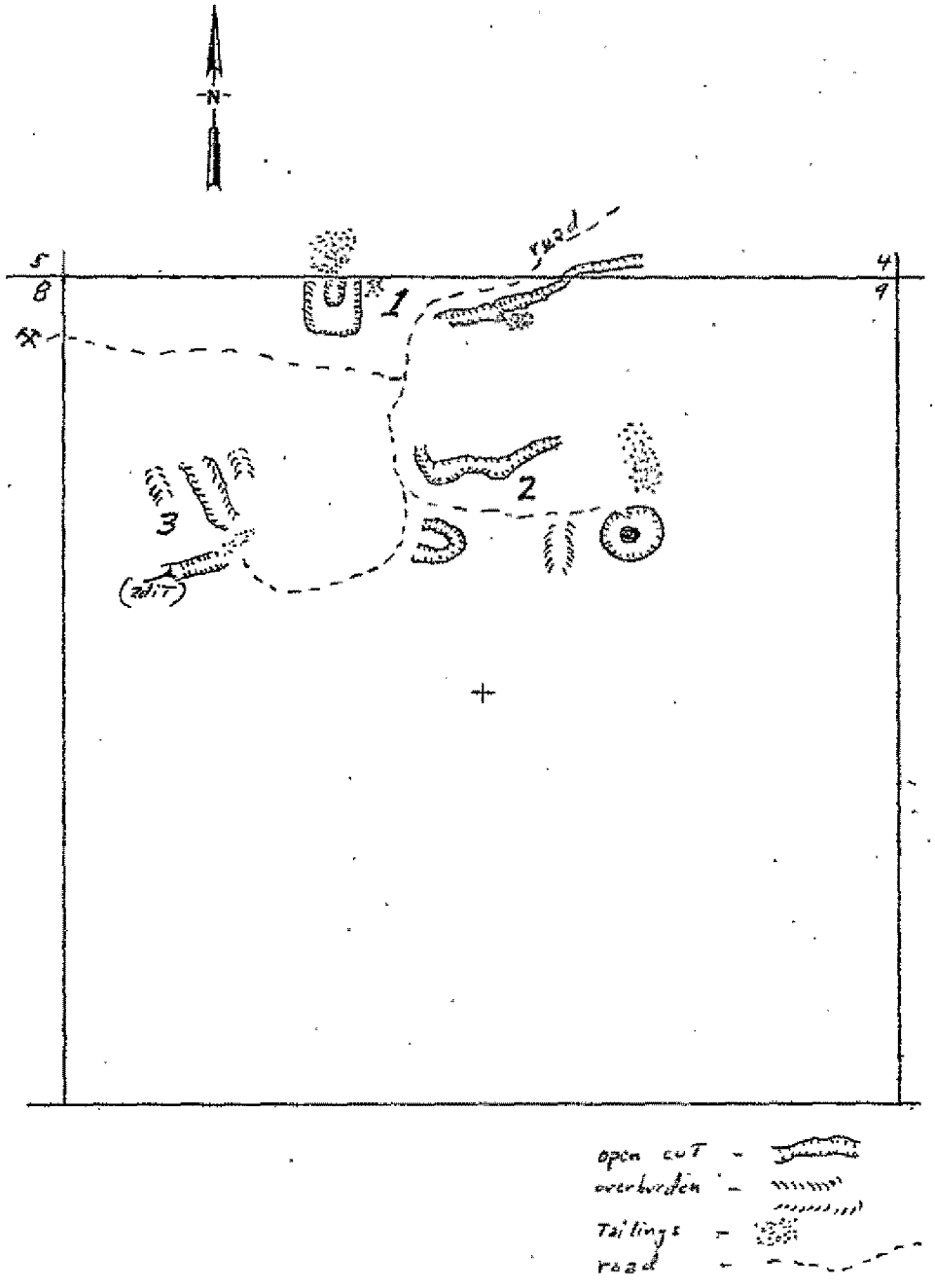


Fig. 1 Diagrammatic sketch of Section Nine Mine workings. Numbers refer to areas as they are discussed in text. The overburden piles are composed of unconsolidated material; the tailings piles are limestone fragments.

V-33

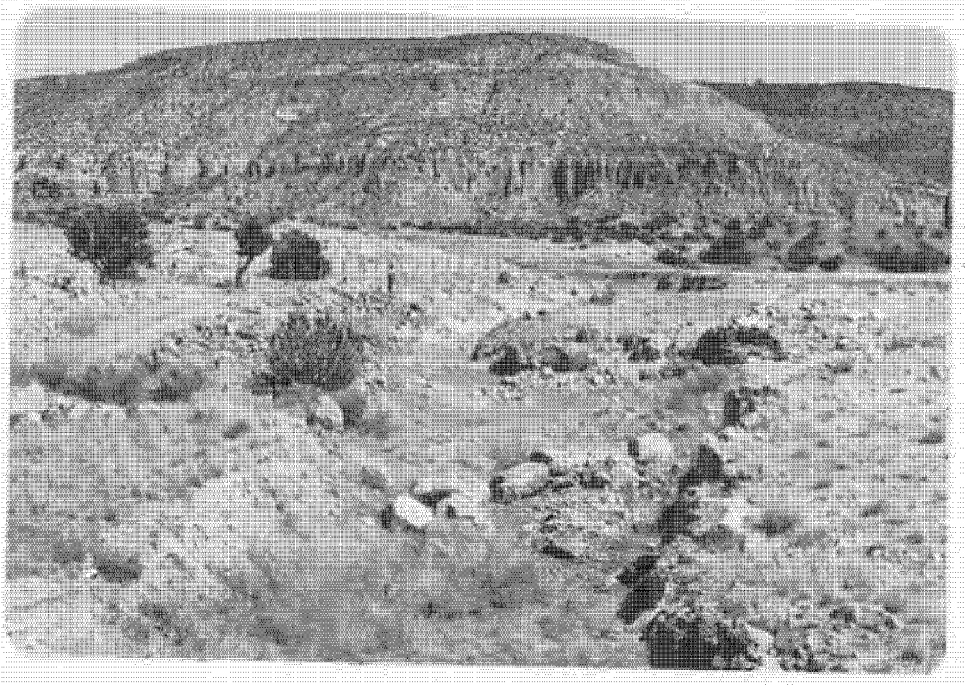


Photo (a) Looking eastward along the north section 9 line at east-west trending cut in area 1. Note person at left of center for scale, and access road at far left.

Photo (b) Looking south into 75' x 100' open pit several hundred feet west of linear cut in photo (a).

V-34

Photo (c) Looking northwest at linear cut in area 2.

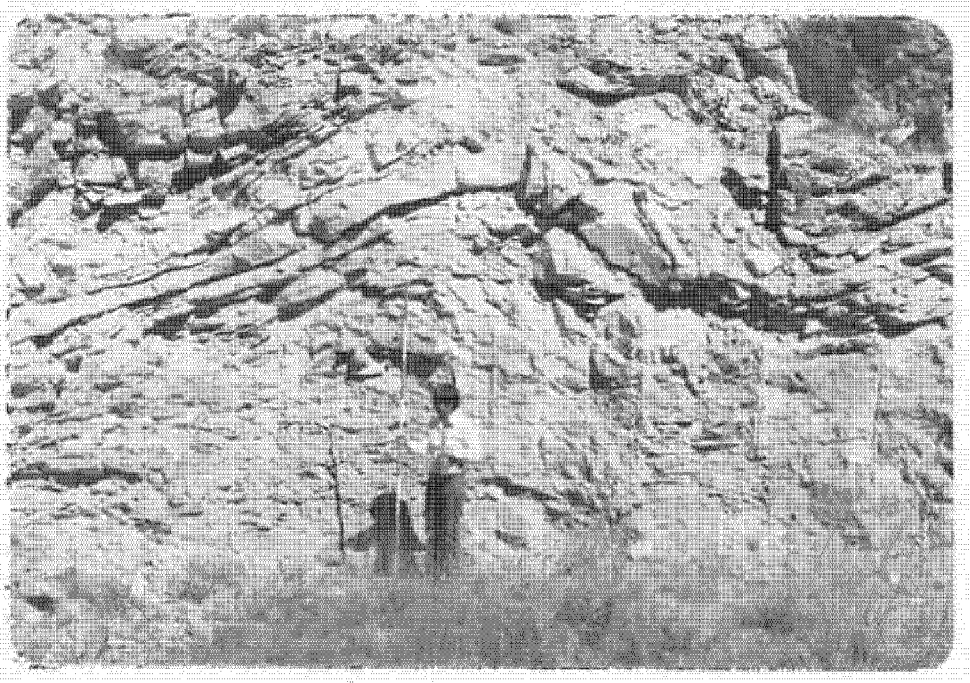


Photo (d) Intraformational fold exposed in cut shown in photo (c).

V-35

Photo (e) Looking eastward into the "eyeball pit" at the east edge of area 2 in Fig. 1. The unconsolidated overburden is here 25' thick.

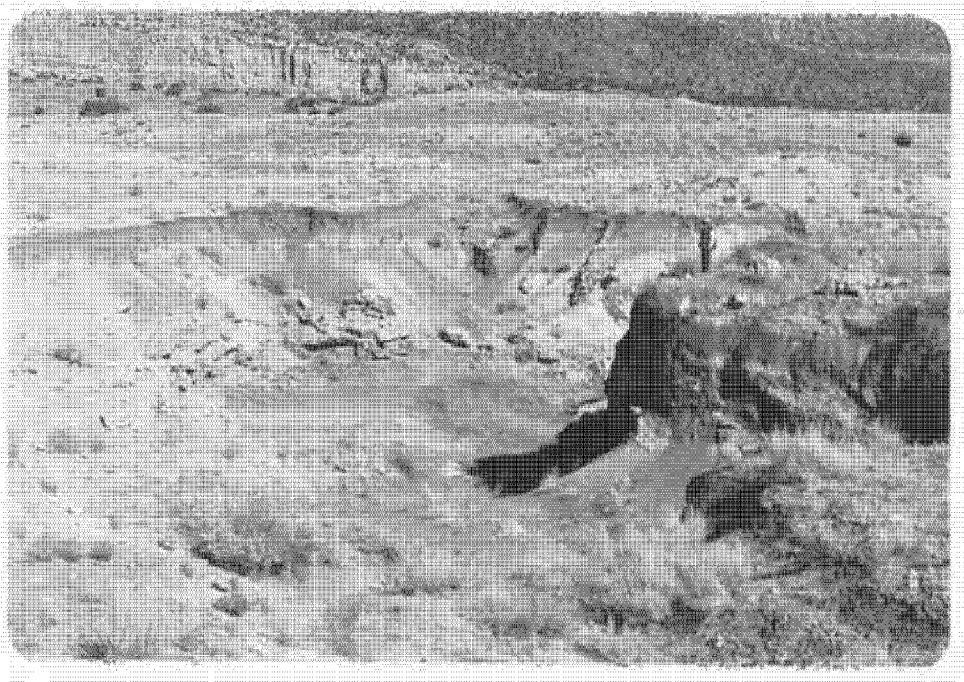


Photo (f) Looking eastward into north limb of "C" shaped open cut in area 2.

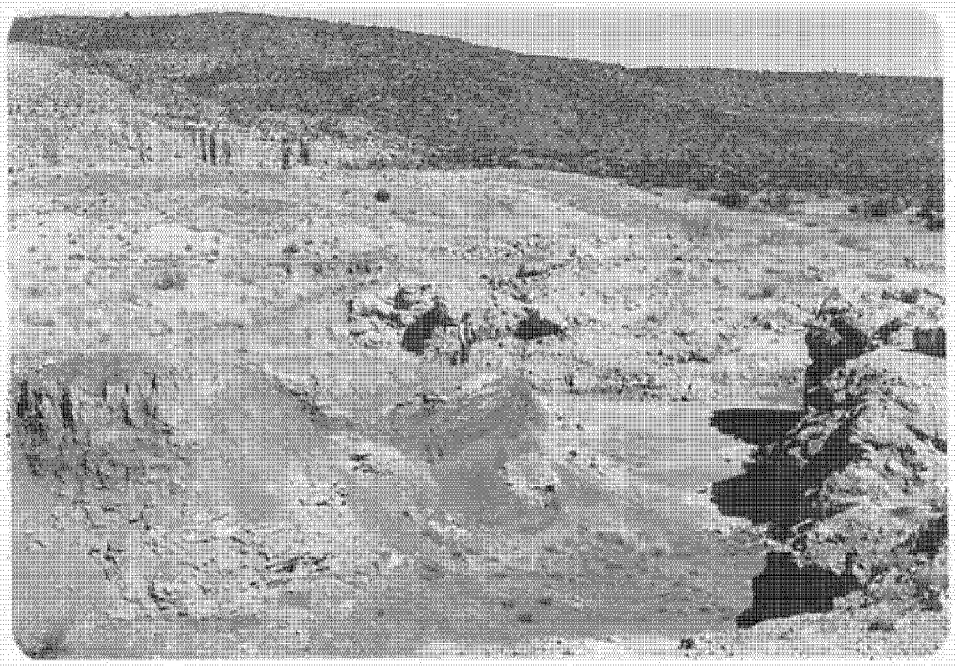


Photo (g) Looking eastward into south limb of "C" shaped open cut in area 2.

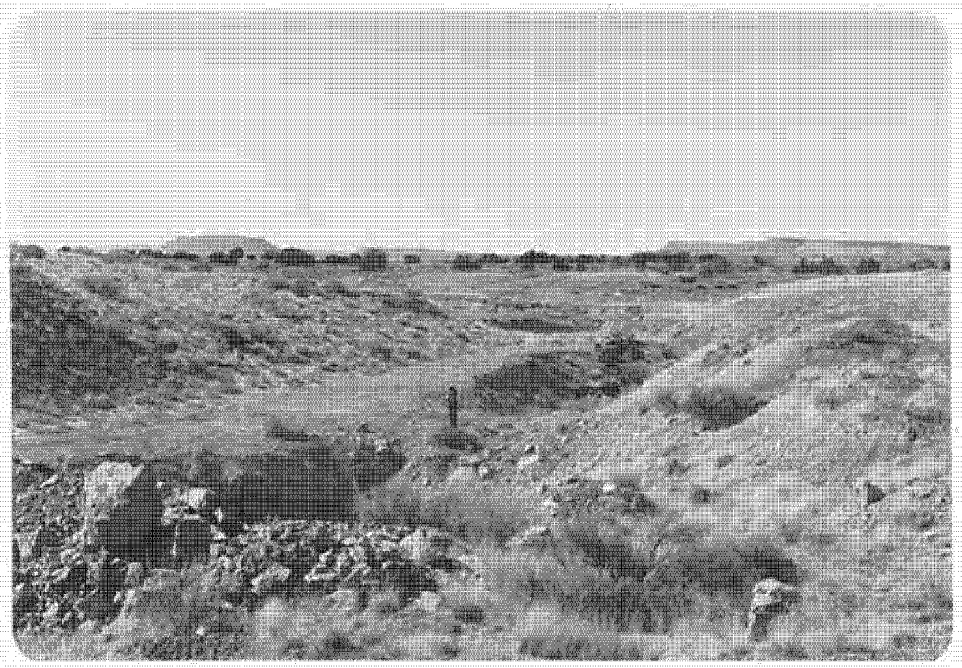


Photo (h) Looking northwest at 500' long cut in northern portion of area 3. The tailings in this area gave strong scintillometer response-up to 3000 cps.

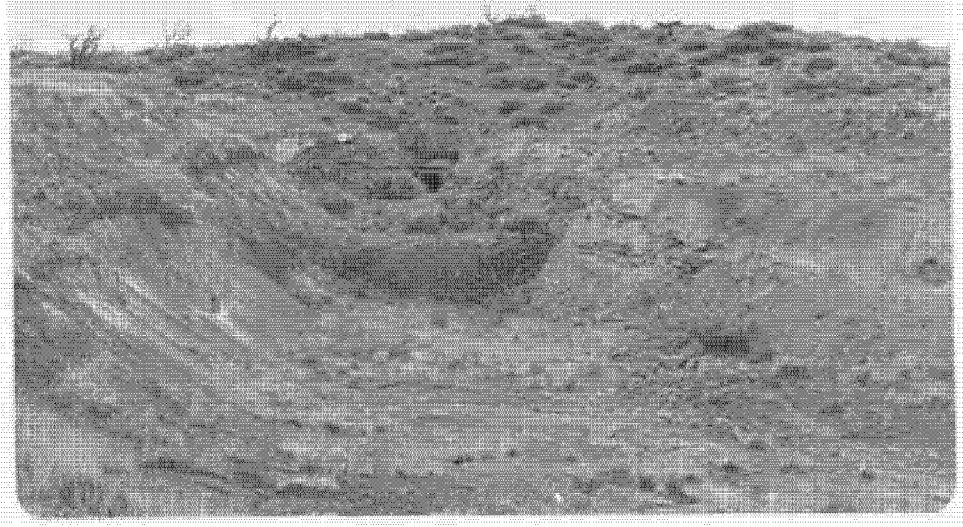


Photo (i) Looking westward inot west trending cut with adit at west end; cut is 325' long, up to 50' wide. Scintillometer response is strong, 1000 cps.

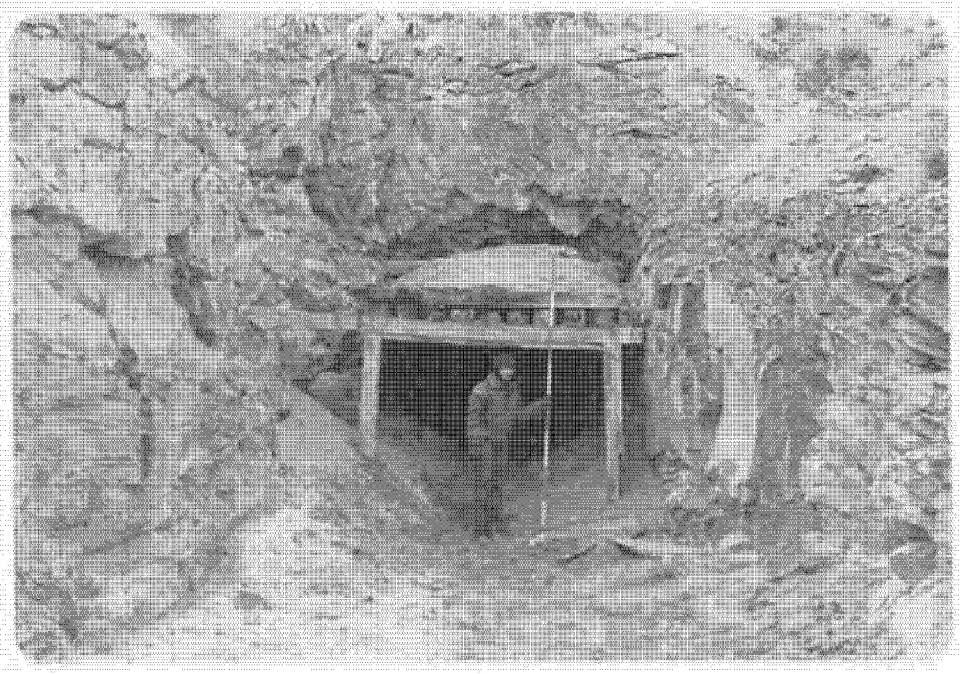


Photo (j) Close up of adit shown in (i); portal is 6' high, 7' wide, and timbered in about 20'.

Date visited Mar. 18, 1980

Mine name(s) Taffy (Bonanza) County Valencia

Section SW/4, SW/4, 11 Twnsh. 12N R. 9W

Quadrangle sheet Dos Lomas

Mining district Mt. Taylor

Elevation 7,700'

Nearest city and/or dwellings Ambrosia Lake junction, 5 mi N.; Roundy Ranch, 2 1/2 mi W.

The Taffy mine is located in the southwest corner of sec. 11 on the south slopes of La Jara Mesa. It is accessible by the U.S. Forest Service access road that leaves State Highwy No. 53 at a point .75 mi north of the UN-HP uranium mill. Travel eastward on the access road about 3.6 mi. to the Cibola National Forest boundary and turn left (north) for 2 mi. At this point road will swing abruptly westward (La Jara mine on immediate left) and a lesser road forks off to the north toward La Jara Mesa. Take this north fork and the Taffy mine access road on the mesa slope will come into view. Road from base of mesa up to mine is in poor condition, and last 1/2 mi. of trip must be made on foot.

The mine consists of a 300' long bench cut in the Poison Canyon sandstone tongue of the lower Brushy Basin member, (see photo a). Bench is up to 45' wide at maximum and the face is 20' high and stable. The highest scintillometer readings were obtained along a mudstone lens about 5' above the base of the cut; the lens contains bluish to greenish gray clay galls and some carbonized plant debris. Readings of up to 4,500 cps were recorded near the southeast end of the cut at the location shown in photo (b). The dump extends for 70' downslope below the cut; scintillometer readings in dump average about 200 cps (or 3x background).

The mine was operated briefly in 1961 by the Trustco Corporation. It ceased operations in December, 1961; total production is unknown.

References:

1. Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. paper 603

2. Field notes, 3/18/80

3. Granger, H.C., 1963, Mineralogy, in, Geology & Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources Memoir 15; p. 29.

V-31

Photo (a) Looking NW at Taffy mine bench cut; note range pole at right for scale.

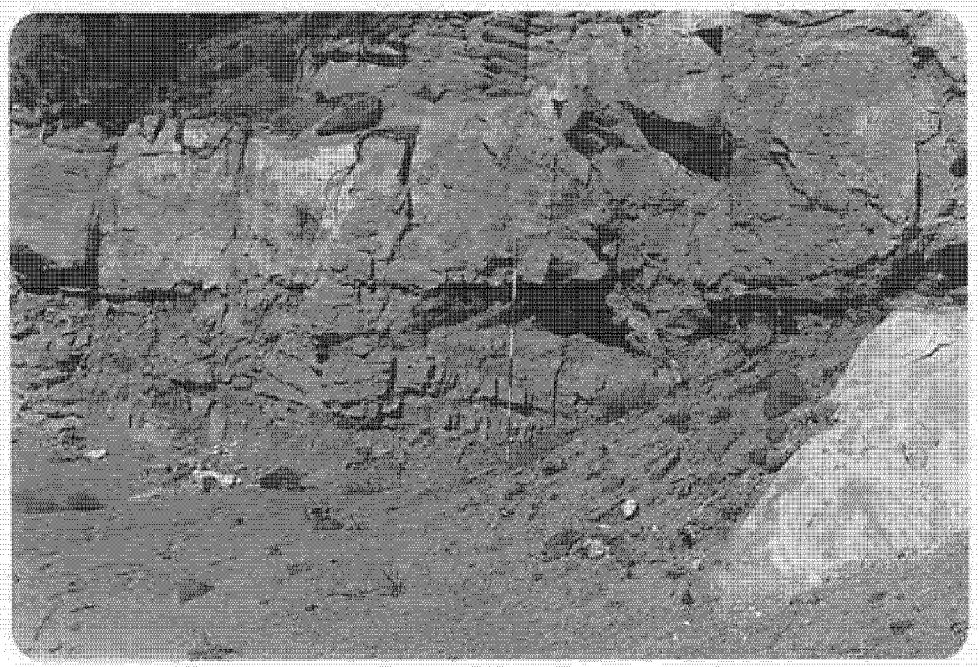


Photo (b) Close up at ore bearing mudstone lens indicated in photo (a) by the range pole.

V-40

Date visited Jan. 30, 1980

Mine name(s) La Jara County Valencia

Section NW-1/4 SE-1/4 15 Twnsh. 12N R. 9W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,060'

Nearest city and/or dwellings Ambrosia Lake Junction, 5½ mi. N.; the Roundy Ranch, 2½ mi. NW

The La Jara mine is located on a Todilto limestone capped mesa near the center of Sec. 4. Access is via the U.S. Forest Service Road that leaves State Highway No. 53 about .75 mi. north of the UN-HP uranium mill. Follow the access road eastward for approximately 3.6 mi. to the Cibola National Forest boundary then turn left (north) for another 2.0 mi. Mine is just to left as road swings abruptly westward.

The workings on the La Jara consist of (1) an open pit nearly 250' across, up to 10' deep, with prominent waste piles on 3 sides (see photo a), and (2) a 120' long bench cut immediately to the northwest of the pit (see photo b). Scintillometer readings in the open pit did not exceed 200 cps and were generally about 150; only a trace of yellow uranium mineralization noted on limestone fragments in waste piles. A 3' wide linear prospecting trench runs eastward from the open pit; no elevated counts recorded in the trench.

The bench cut, shown again in photo (c), is up to 10' deep near the middle at the prominent intraformational fold. A dark greenish mineralization forms a crust on the face in the vicinity of the fold; maximum scintillometer readings along the face are in the 140-160 cps range. A close-up of the fold showing inter-laminations of darkly colored carbonaceous zones is shown in photo (d). The mine dump extends westward from the base of the cut for over 70'; the toe of the dump (see photo e) is over 9' high in places. Scintillometer readings on the dump were not significantly above background, which is 70 cps. A drainage line continues westward from the dump; no elevated counts were recorded in the drainage line below dump.

The mine has been inactive since May, 1957 (New Mex. State Mine Inspector's Office). However, Hilpert 1969, stated that the deposit was mined from 1952-1960.

References:

1. Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.

2. Hilpert, L. 1965, Uranium Section, in, Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87.

3. New Mexico State Mines Inspectors Office, inactive uranium mine file.

4. Field notes, 1/30/80.

V 11

Photo (a) Looking NW at 250' long open pit at La Jara workings; note range pole at left center for scale. Waste piles at left up to 10' high.

Photo (b) Looking SE at 120' long bench cut; waste piles from open pit shown in background. Note range pole at right center for scale.

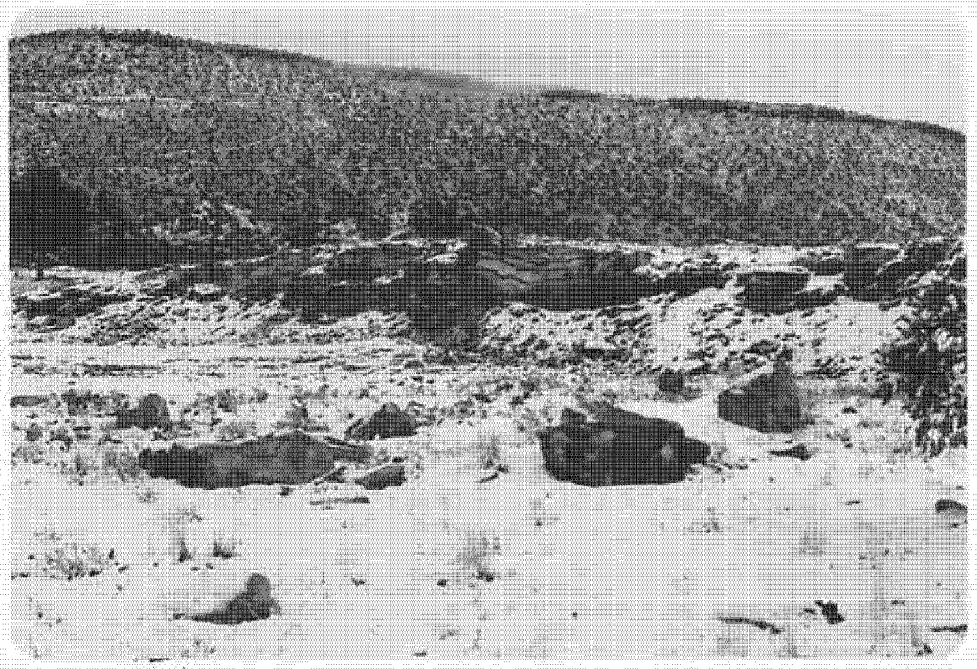


Photo (c) Looking NE at same bench cut; note fold at center behind range pole. Also note exploration roads climbing south slope at La Jara Mesa in background.

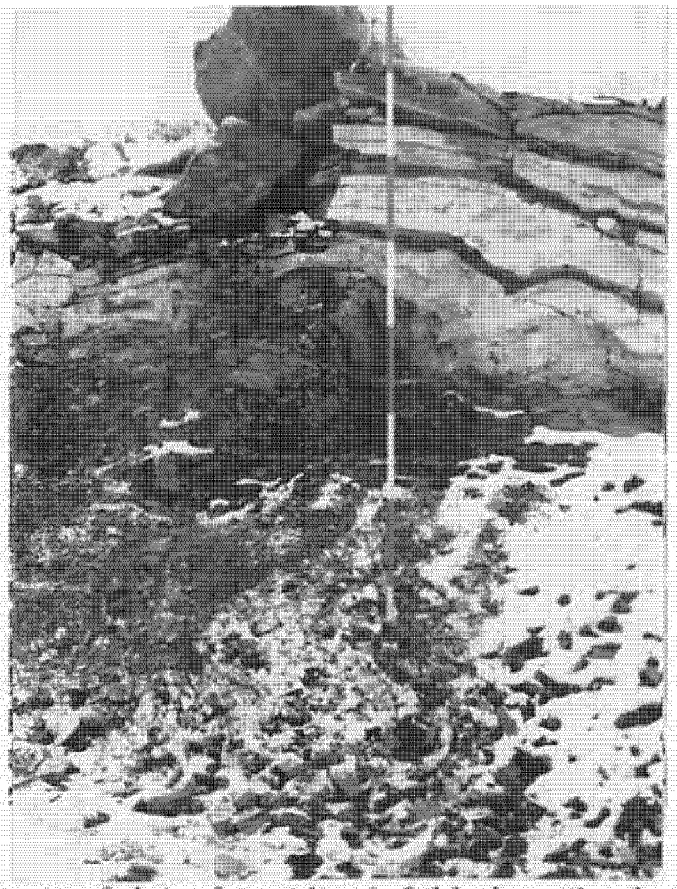


Photo (d) Close-up of intraformational fold shown in photo (c).

Photo (e) Looking S at toe of dump at bench cut; note range pole at right center for scale.

Date visited Jan. 30, 1980

Mine name(s) Zia County Valencia

Section SW/4, 15 Twnsh. 12N R. 9W

Quadrangle sheet Dos Lomas

Mining district Mt. Taylor

Elevation 7,080'

Nearest city and/or dwellings Ambrosia Lake junction 5 1/2 mi. N.; Roundy Ranch, 2 mi. NW.

The Zia mine is located on a low Todilto limestone capped mesa in the SW/4 Sec. 15 just 1/4 mi. inside the Cibola National Forest boundary. It is accessible via the U.S. Forest Service access road that leaves state Highway No. 53 at a point .75 mi. north of the UN-HP uranium mill. Travel eastward on the access road for 3.6 mi to the Forest boundary and turn left (north) for 2 mi. At this point the Zia mine will be approximately 1/2 mi. to west and the tailings dump will be visible.

The mine consists of a box cut into the Todilto limestone that is 200' long (E-W), 120' wide, and 30' deep. Ramps descend to floor of cut from the SE corner and the NW corner. The Entrada-Todilto contact is exposed along the north wall of the cut and mineralization reportedly extends downward into the upper Entrada. A panoramic view to the east showing the mine site is given in photo (a). Views of the pit from the east end are shown in photos (b) and (c). Photo (b) shows the ramp at the northwest corner and photo (c) shows the two stub adits at the bottom, one in the west face and one in the south face. The portal of the western adit is 7' wide and presently only 3' high because recent caving and slumping has partially blocked the entrance. The adit is about 6' deep and crudely timbered in several places see photo (d). Scintillometer readings at the portal were up to 600 cps, or about 8x background.

The portal of the southern adit is also about 7' wide; some coarse waste rock partially blocks the entrance which is presently about 3 1/2' high on the right side (see photo e). The adit is approximately 18' deep with little evidence of oxidized uranium mineralization on the face, although the entire length was not explored in detail because of hazardous conditions. Some crude timbering remains in place; scintillometer readings ranged up to 1,700 cps just inside the adit.

Just to the west of the box cut, immediately behind the viewer in photo (a), is an east-west trending 120' long by 15' wide prospecting trench (see photo f). The trench descends gradually from the east end, reaches a maximum depth of 11' near the center and breaks through the edge of the mesa top on the west end forming a notch. The waste material at the west end (see photo g) extends downslope for 60' or more with low scintillometer readings - 150 cps maximum. The material stockpiled at the east end of the trench produced much higher scintillometer readings, up to 600 cps; however, part of this material might have been derived from the larger box cut. A sketch of the entire mine site, Fig. 1, illustrates most of the features described above.

V-45

The deposit was mined during the 1952-60 period (Hilpert, 1969). The State Mine Inspector's Office records, however, show that the Zia Mining Company, which operated both the La Jara and Zia mines, last registered this mine in August, 1957. Total productions is not known.

A claim marker on the tailings dump south of the box cut contains an ammended claim location certificate dated 12/20/78. It ammends the original claim named the Hunch #14, dated 7/1/64, and staked by D.L. Varnum of Monahans, Texas 79756. The ammendment was signed by Warren Parker.

References:

1. Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. paper 603

2. New Mexico State Mine Inspector's Office, inactive uranium mine file

3. Field notes 1/30/80

Y-6/6

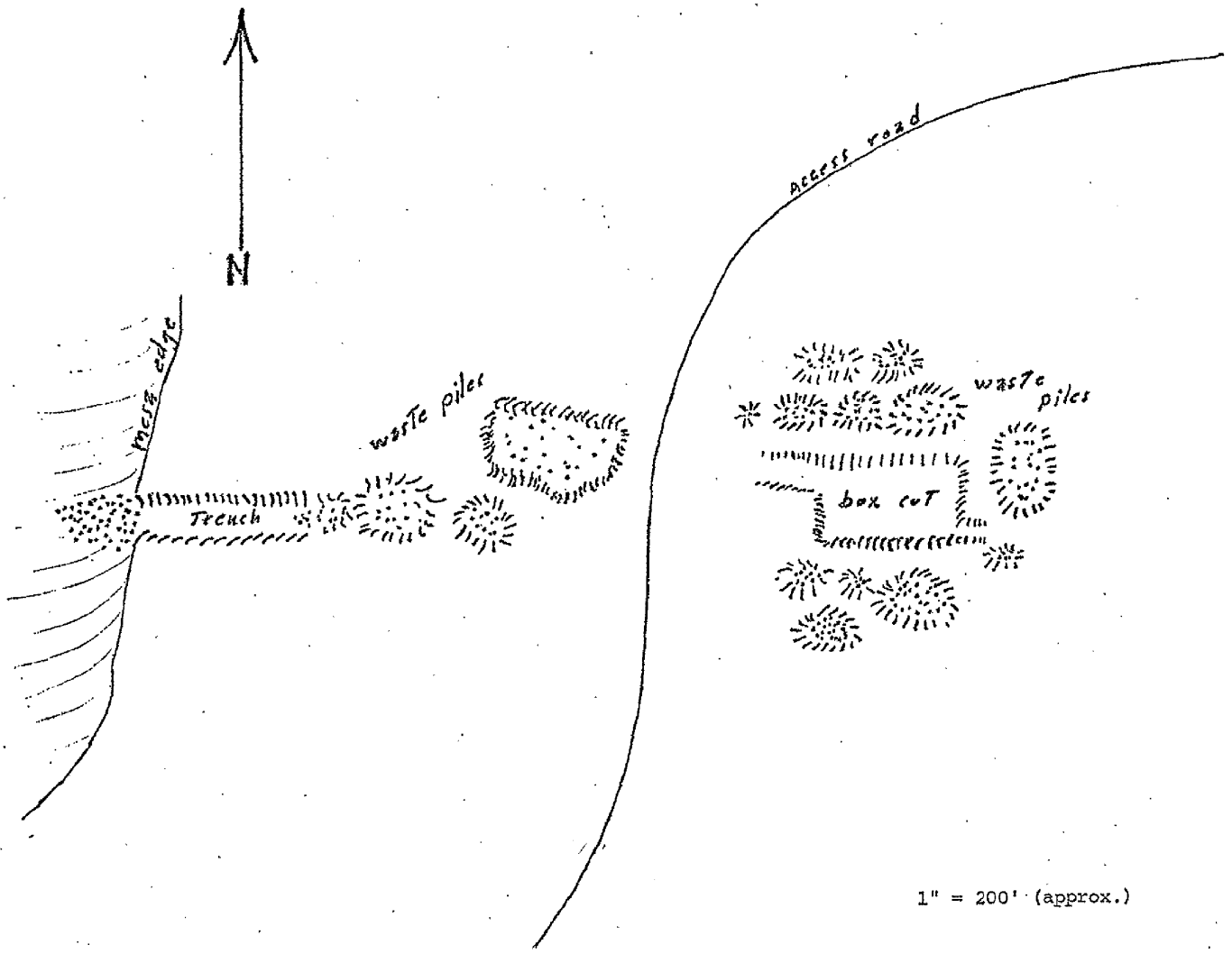


Fig. 1 Diagrammatic sketch of Zia mine site

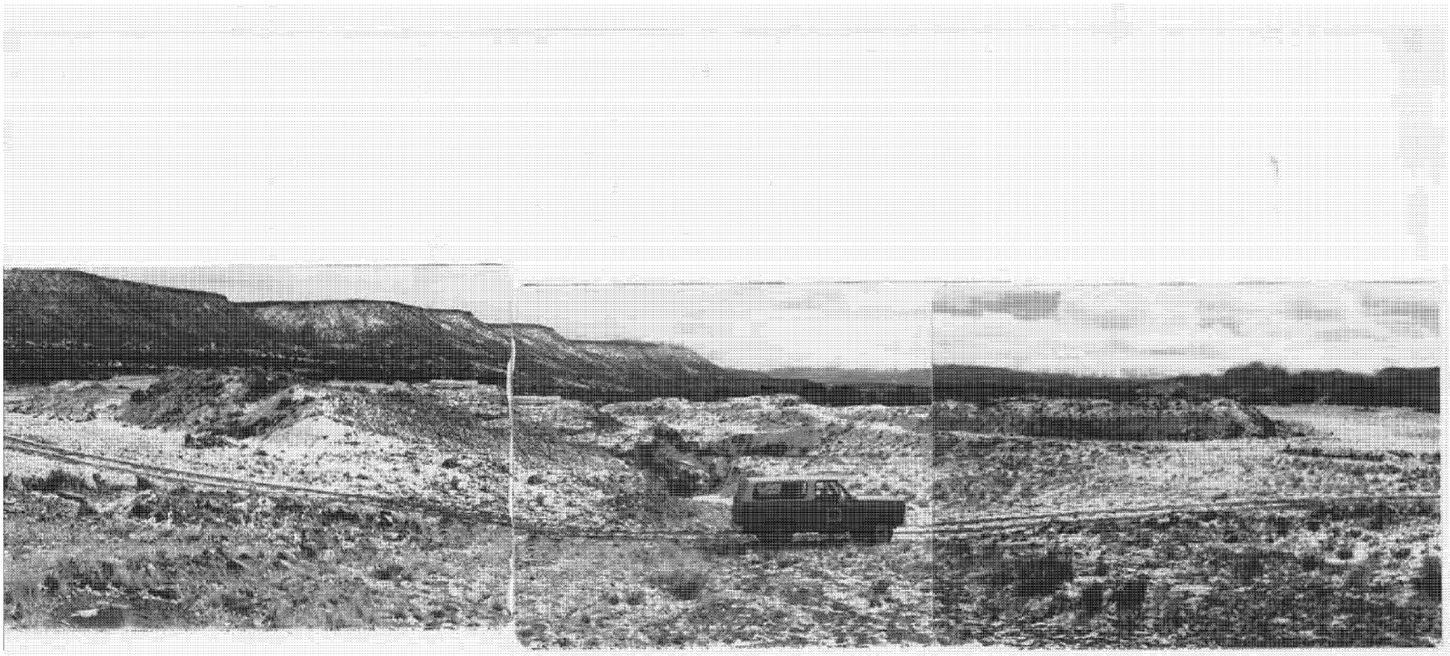


Photo (a) Looking eastward at Zia Mine; open pit at center is 30' deep. La Jara Mesa in background at left. Photo taken after a light snow had fallen.

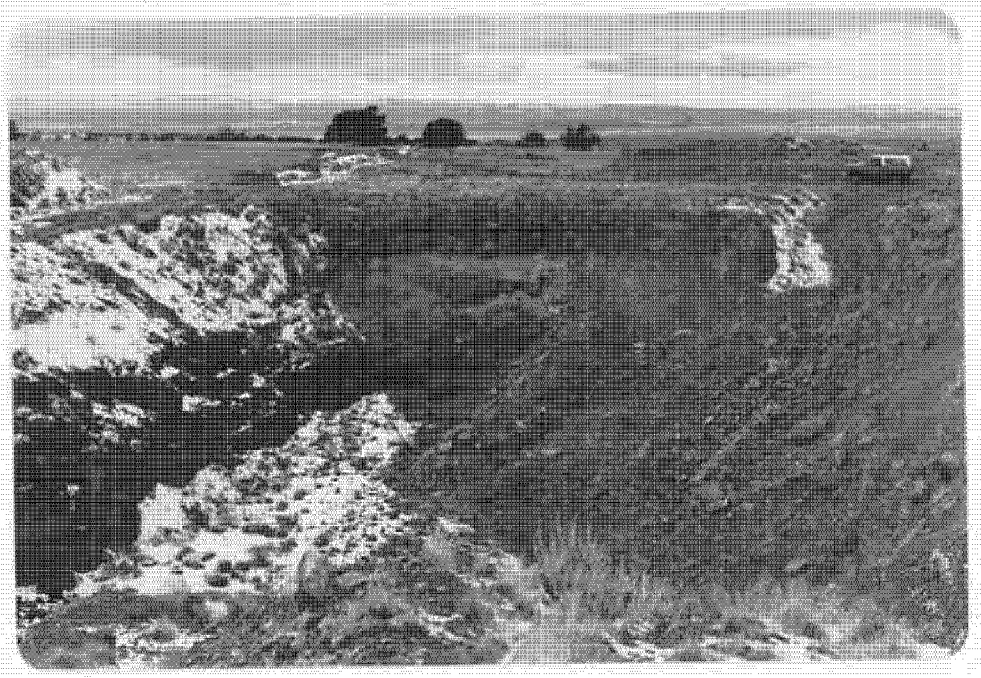


Photo (b) Looking westward at box cut; note ramp at upper right.

Photo (c) Looking westward from nearly same point as in photo (b), but both adits at bottom of cut are shown here.

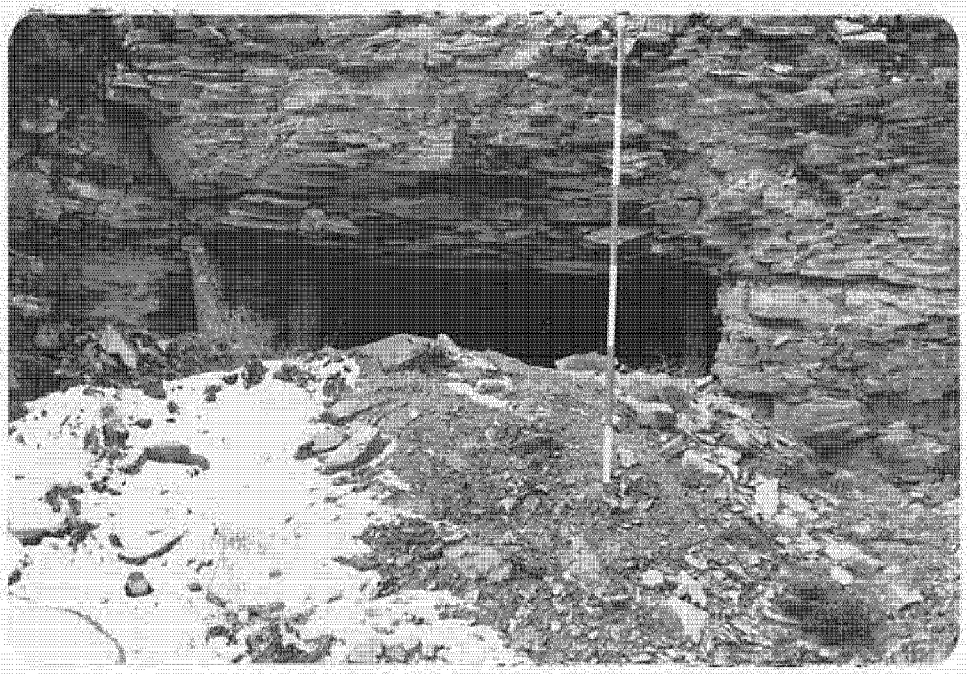


Photo (d) Looking westward; close-up of adit driven in western face at cut.

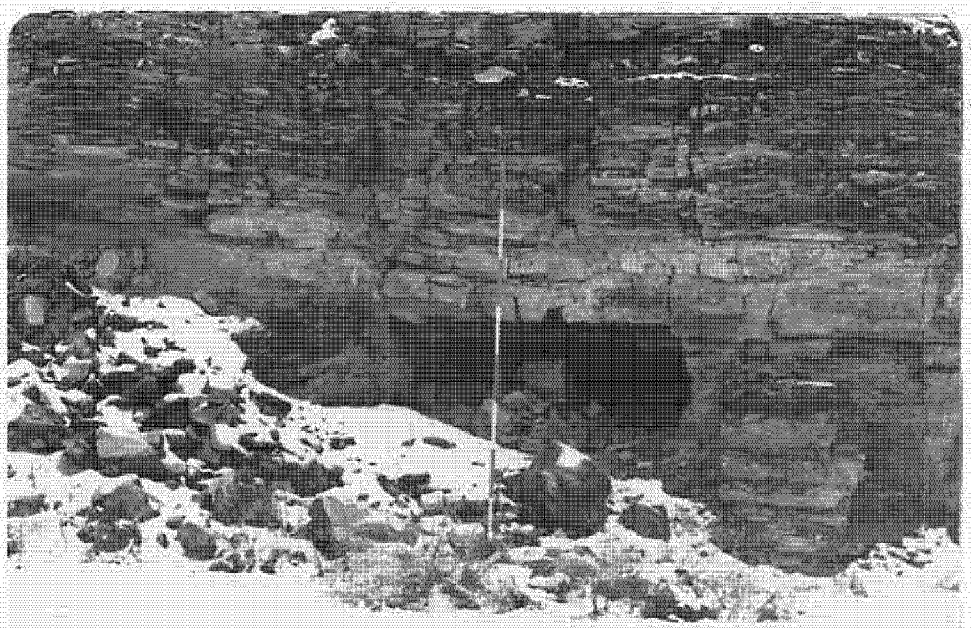


Photo (e) Looking southward; close-up of adit driven in southern face of cut.

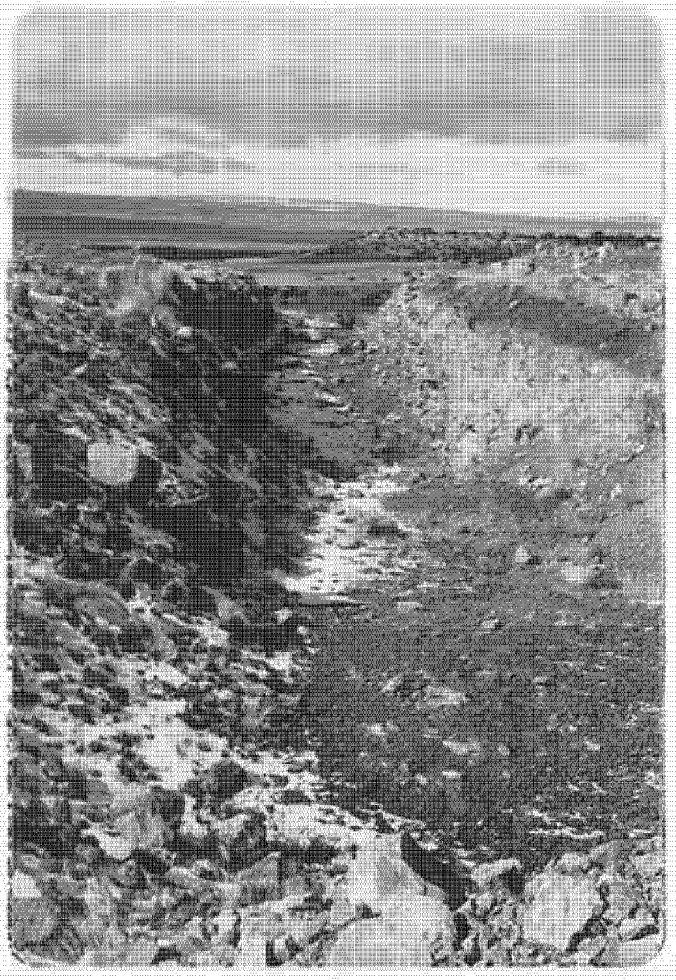


Photo (f) Looking westward into 120' long prospecting trench west of box cut.

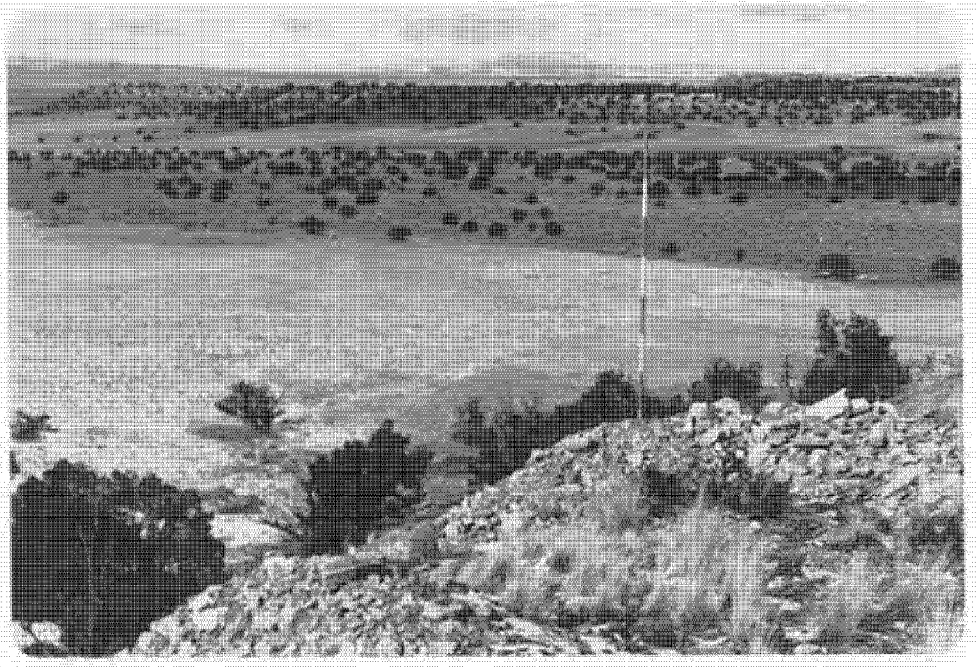


Photo (g) Portion of dump at west end of trench; Haystack Mountain in center distant background

V-51

Date visited Jan. 30, 1980

Mine name(s) Linear Prospecting Trenches County Valencia

Section S½ 15; N½ 22 Twnsh. 12N R. 9W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,000'

Nearest city and/or dwellings Roundy Ranch, 2 mi. NW

East-west trending linear prospecting trenches in the Todilto limestone that caps the low mesas in sections 15 and 22 are very numerous. They are typically 2½'-3' wide, 2½' deep, and some can be traced for over ½ mi. They are quite straight and parallel, and spaced about every 400'-500' between the center of Sec. 22 northward through the center of Sec. 15. Most of the material excavated lies on one side of the trench. Photos (a) and (b) offer views of the trenches in the south 1/2 of Sec. 15. The trenching is restricted to Cibola National Forest land.

The area is accessible via the U.S. Forest Service road that leaves State Highway 53 at a point 0.75 mi. north of the UN-HP uranium mill. Travel eastward on this road to the Forest Service boundary and then turn left (north) for 1 mi.

References:

1. Field notes, 1/30/80.

V-52

Photo (a) Looking westward in Sec. 15 at typical linear prospecting trench in Todilto limestone; note range pole for scale.

Photo (b) Looking west along trench in Sec. 15 with Zia Mine dump at left in the background. Trench is typical of those found southward into Sec. 22.

V-52

Date visited 5/6/80

Mine name(s) Sandy (South Laguna Mines) County Valencia

Section SE¼ 22, NE¼ 27 Twnsh. 9 N R. 5 W

Quadrangle sheet Dough Mountain 7½'

Mining district Laguna

Elevation 5,920'

Nearest city and/or dwellings Mesita, 3 miles northeast

The Sandy and/or South Laguna Mines are located near the sec. 22-27 line about 3/4 miles south of the south boundary of the Laguna Pueblo grant. The site may be reached by taking the Mesita exit off I-40 and proceeding south on a dirt road for about 1½ miles to the second pipeline crossing. Then go west for about 1¼ miles to sec. 22. Prospecting pits and a mine dump are visible.

The mine consists of (1) a 50' diameter pit in the extreme north of sec. 27 (see photo a); (2) two small dumps or low grade ore piles, each about 10' wide, 40' long, and 4' high (see photo b); and (3) a rectangular pit, 20' x 30', 4' deep that is 450' east of the first pit (see photo c). Mineralization is in the uppermost beds of the Entrada sandstone and in the base of the overlying Todilto limestone. A diabase sill, locally up to 20' thick, has intruded the lower Todilto limestone. The intrusion has displaced the upper part of the deposit (Hilpert, 1969). The uranium occurs as finely disseminated coffinite and uranite (Hilpert, 1969). Scintillometer readings along the north wall of the first pit were up to 6,000 cps, in the rectangular pit up to 1,200 cps, and on the dumps shown in photo (b) up to 300 cps. Some dark greenish, black mineralization was noted, but little if any secondary oxidized uranium minerals were noted in the open pits. Some interesting mineralization has been produced by the metamorphism of uranium deposits near contacts with the diabase sill, (Moench, 1963).

The mine was operated in 1955 by the Anaconda Company. It is not certain if one of the two described pits was assigned the name Sandy and the other the South Laguna, but both were Anaconda operations. Hilpert (1969) listed the workings as the Sandy with additional deposits in sec. 27. The State Mine Inspector listed the workings as the South Laguna Mines located in both sections 22 and 27. Date of last registration of the mine is not known.

Recent drilling is evident in sec. 22 under the name of some "Laguna Project."

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Moench, R. H., 1963, Geologic Limitations on the Age of Uranium Deposits in the Laguna District, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15, p. 161.

turn

V-54

(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 5/6/80.

V-55

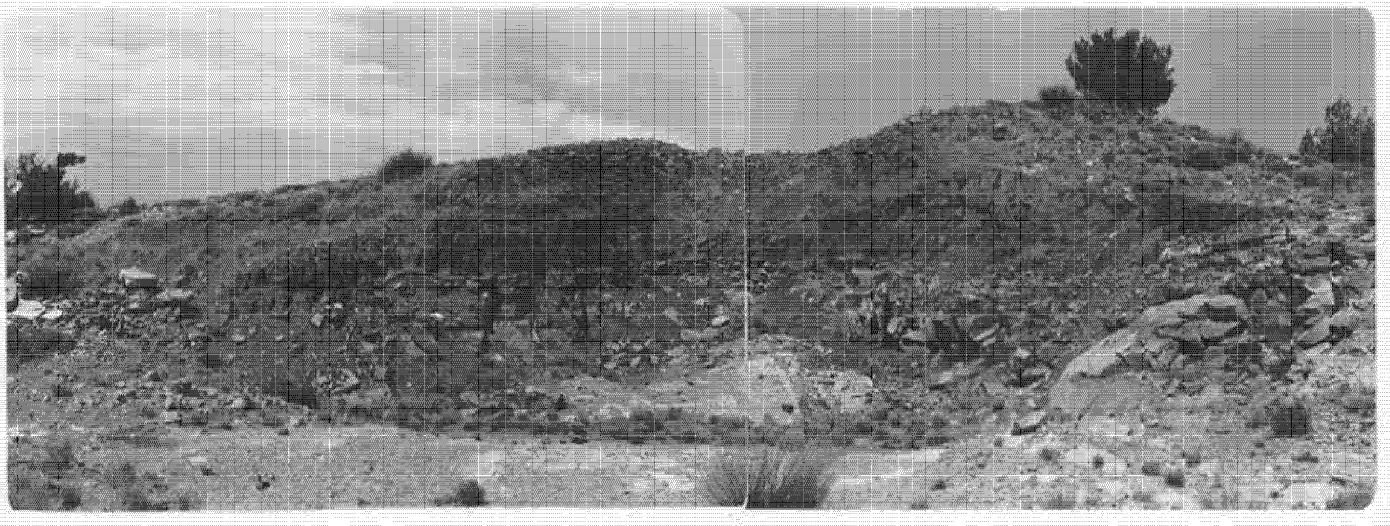


Photo (a) Looking westward into 50' diameter semi-circular pit in the extreme north of sec. 27. Note person at right of center holding range pole for scale.

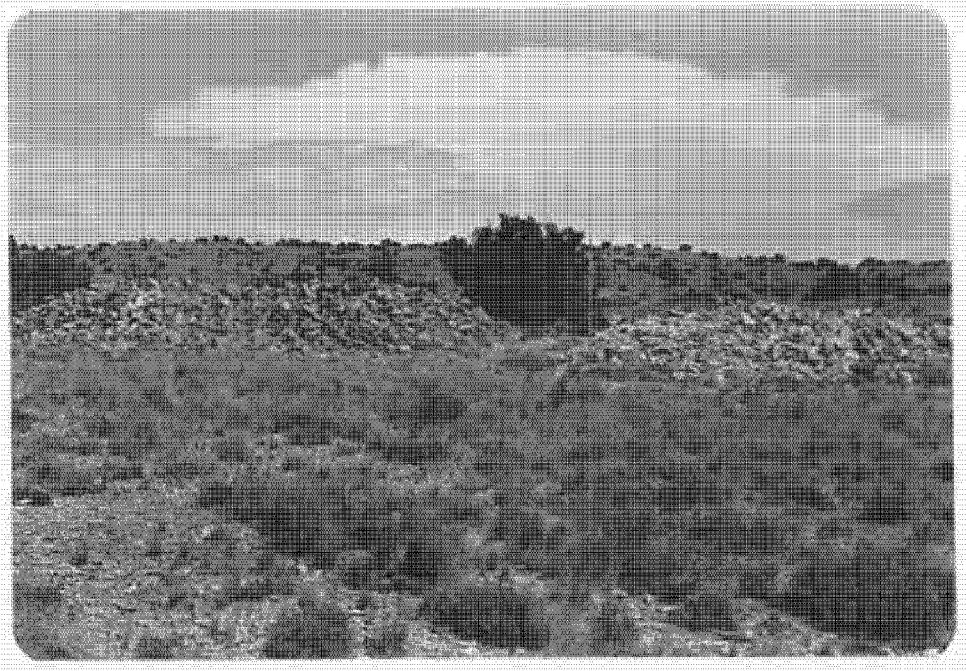


Photo (b) Looking northeastward at mine dump or low grade ore piles; left one is composed of Entrada sandstone, right one Todilto limestone; each is about 4' high.

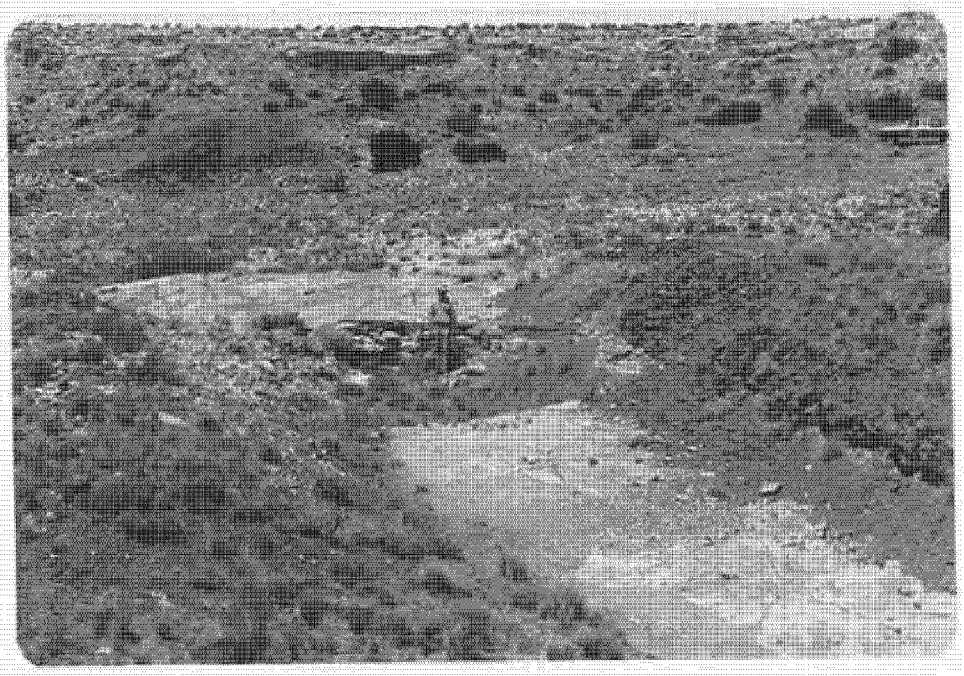


Photo (c) Looking westward into small pit 450' east of main pit shown in photo (a).

V-57

Date visited 1/29/80

Mine name(s) Anaconda F-33 (F-33) County Valencia

Section SE¼ 33 and SW¼ 34 Twnsh. 12 N R. 9 W

Quadrangle sheet Grants 7½'

Mining district Mt. Taylor

Elevation 7,000'

Nearest city and/or dwellings Grants, 4½ air miles southwest

The F-33 Mine is located on the west slope of East Grants Ridge. It is accessible via the U.S. Forest Service access road that leaves state highway no. 53 at a point .75 mi. north of the UN-HP uranium mill. Travel east on the access road for about 3.6 mi. To the forest boundary, then turn right (south) and follow dirt road to the mine site. The main adit portal is nearly on the Forest Service boundary line.

The mine consists of two adits driven in Todilto limestone, the main one mentioned above, and another approximately ¼ mi. NE in sec. 34. As there are no references to a separate working in sec. 34 it is assumed both these are part of the F-33 Mine, and both workings are described herein. The main adit, shown in photo (a), is driven eastward in a zone of recrystallized limestone. The dimensions of portal are not available as it is secured by a steel plate door shown in the close-up in photo (b). Scintillometer reading at a small opening in the door was 2,500 cps. A drilling mud pit at the left of the portal contained some standing water (see water analysis data, table 1). Just east of the mud pit is a claim marker with document showing that a Fred B. Quimby of Grants, N.M. staked a claim called the Power #1 on Nov. 14, 1979. Telephone number given as contact has been taken out of service. Scintillometer readings along face cut just to right of portal were up to 4,000 cps. One building, a 12' x 18' wooden frame shack, remains at the site about 200' to right of portal (see photo c). The mine dump strewn with lumber and other debris is directly west of and in front of the adit. It measures approximately 400' by 100', and extends downslope 50' (see photo d). Yellow uranium mineralization is very apparent on limestone fragments in dump; scintillometer readings range up to 3,500 cps.

The sec. 34 adit is driven generally eastward; portal is sealed by a plate metal door, (see photos e and f). Scintillometer counts around door opening ranged up to 5,000 cps. Dimensions of adit unknown. A 28' x 75' concrete slab remains at the site just to the right of the trench leading to the adit (see photo g). An electric utility line extends in from the west. The mine dump contains mineralized limestone fragments some of which produced maximum deflection on the scintillometer (+10,000 cps); dump measures about 300' (E-W) by 100', and up to 12' high at west end (see photos h and I).

Mine was operated during 1954-59 and again briefly in the early 1970's. It has been inactive since January 1976. Total production is not known.

turn

V-58

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium section, in, Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87.
(3) Kerr, Paul F., and Wilcox, J. T., 1963, Structure and Volcanism, Grants Ridge Area, in, Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15.
(4) Field notes, 1/29/80.

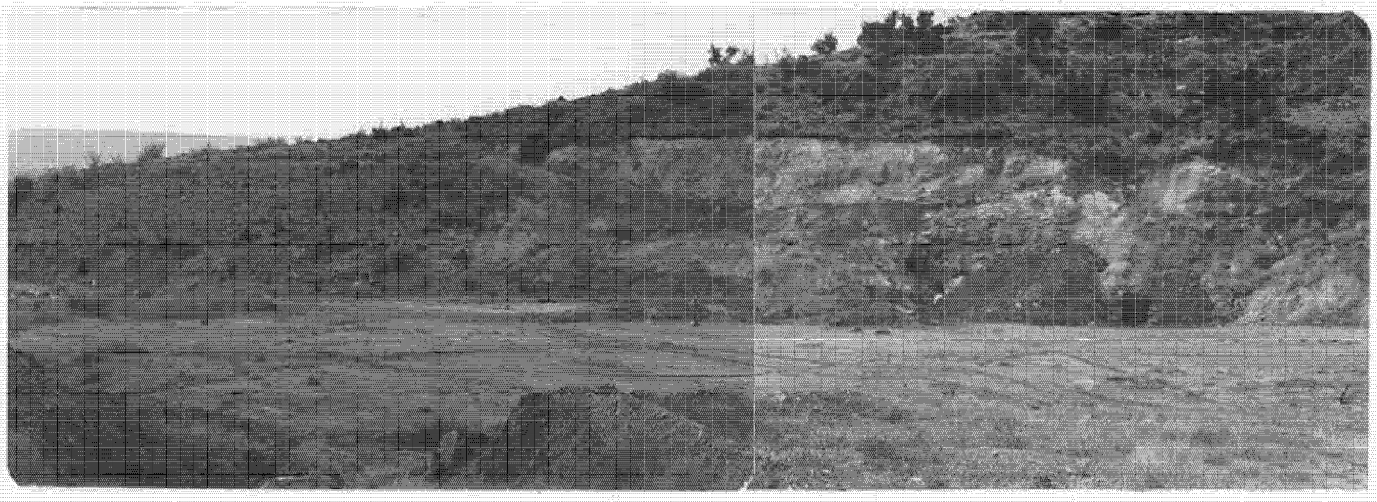


Photo (a) View east-northeast toward face cut and portal of F-33 Mine; at right is plate metal door sealing entrance to adit. Note recent claim marker at left center.

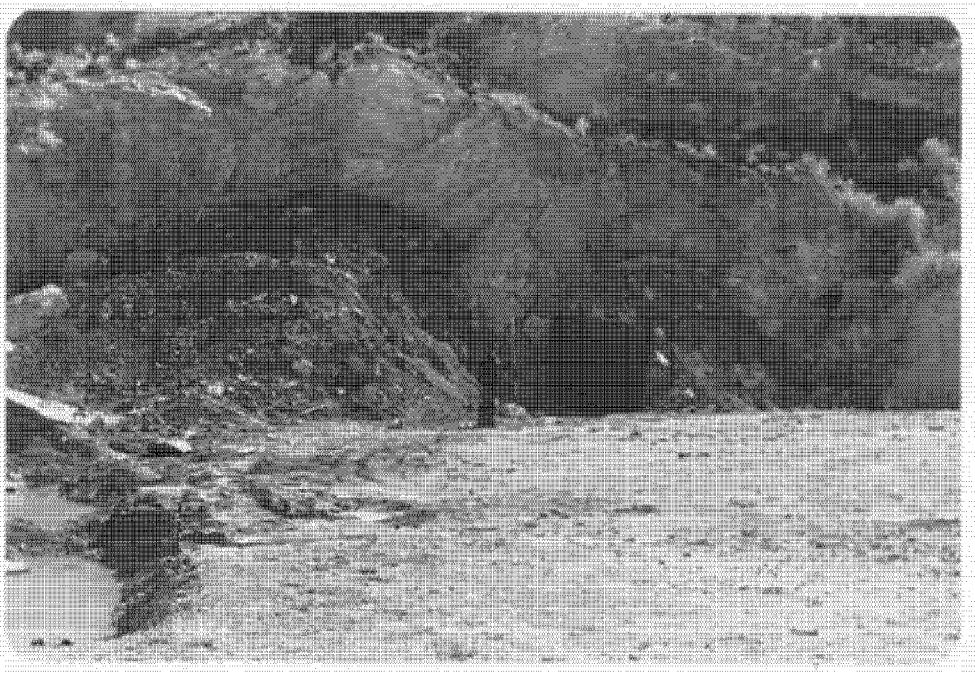


Photo (b) Close up of sealed portal at main adit.

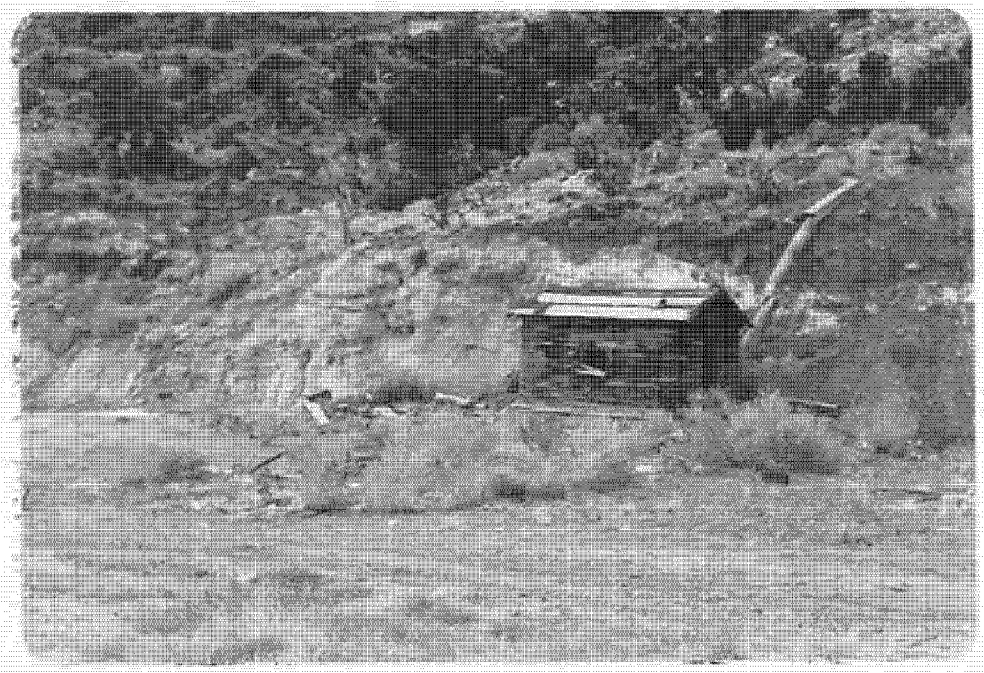


Photo (c) Wooden shack at right of portal of main adit.

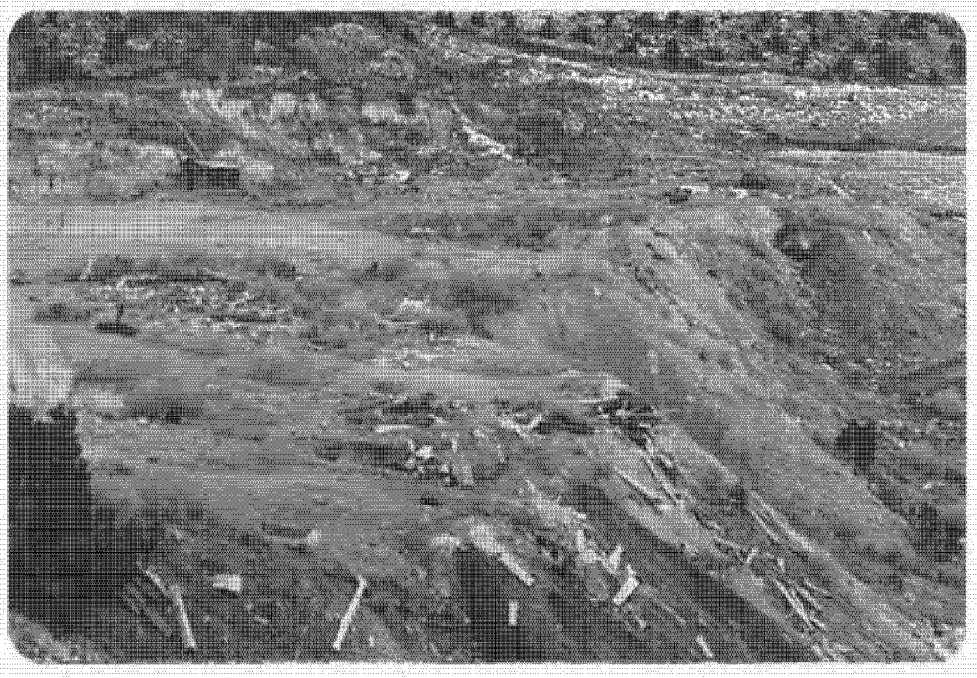


Photo (d) Mine dump of main adit; note wooden shack at left and access road cut at upper right.

V-62

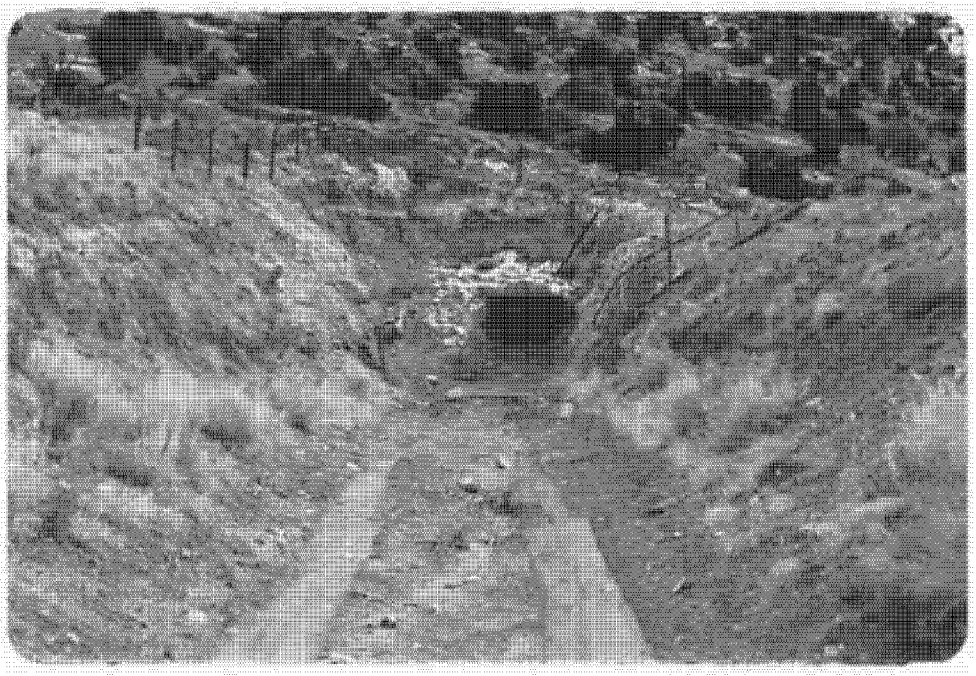


Photo (e) Looking eastward in trench leading to sec. 34 adit sealed with plate metal door.

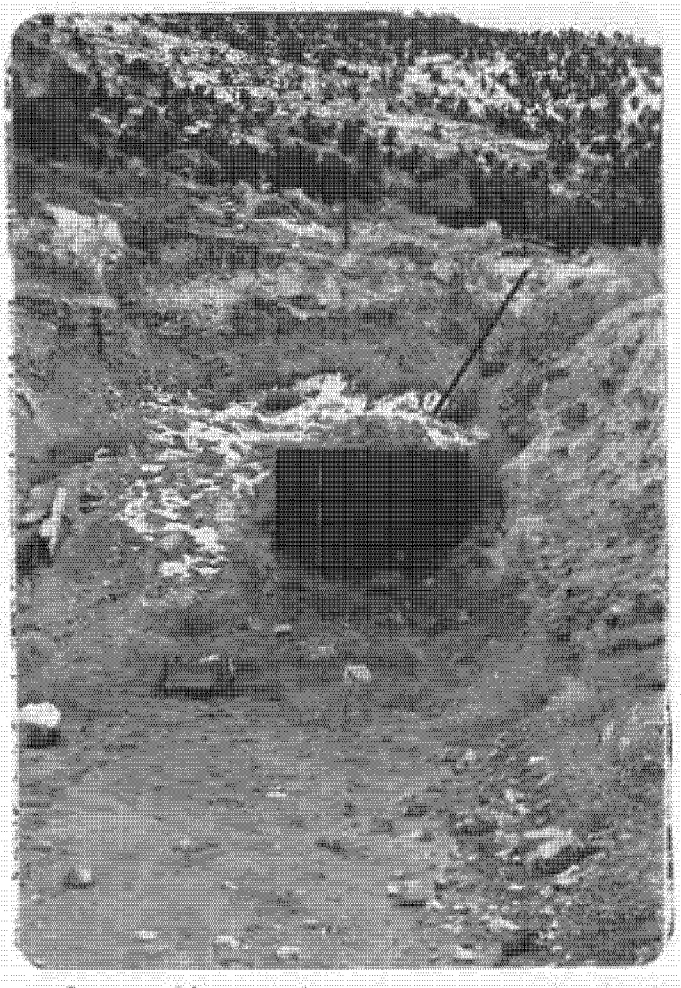


Photo (f) Close-up of sec. 34 portal; note range pole in front of metal door for scale.

V-63

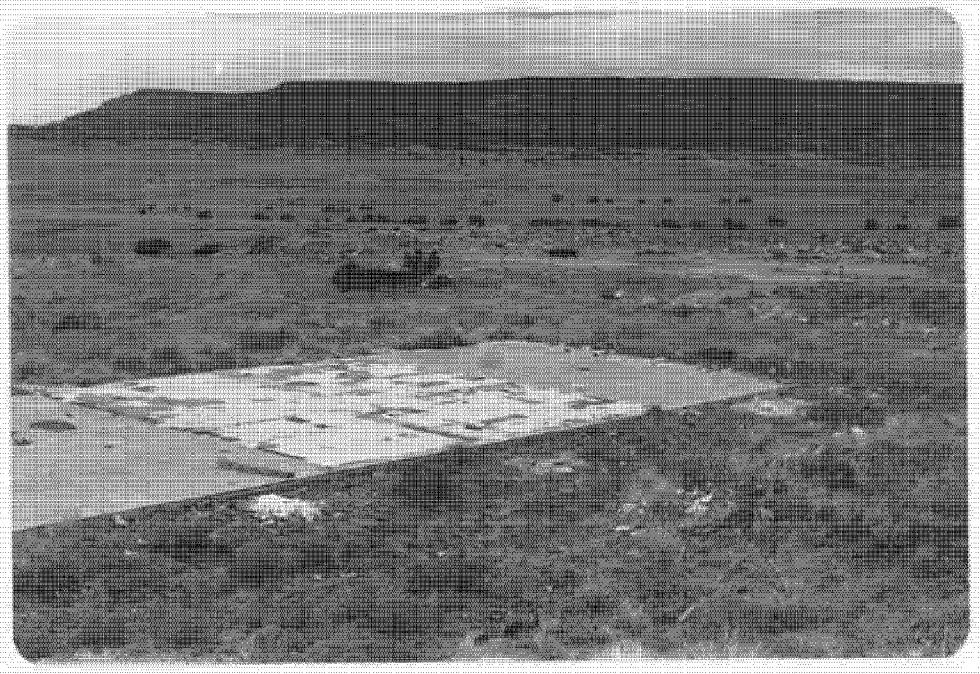


Photo (g) Looking NW at concrete slab near portal of sec. 34 adit.

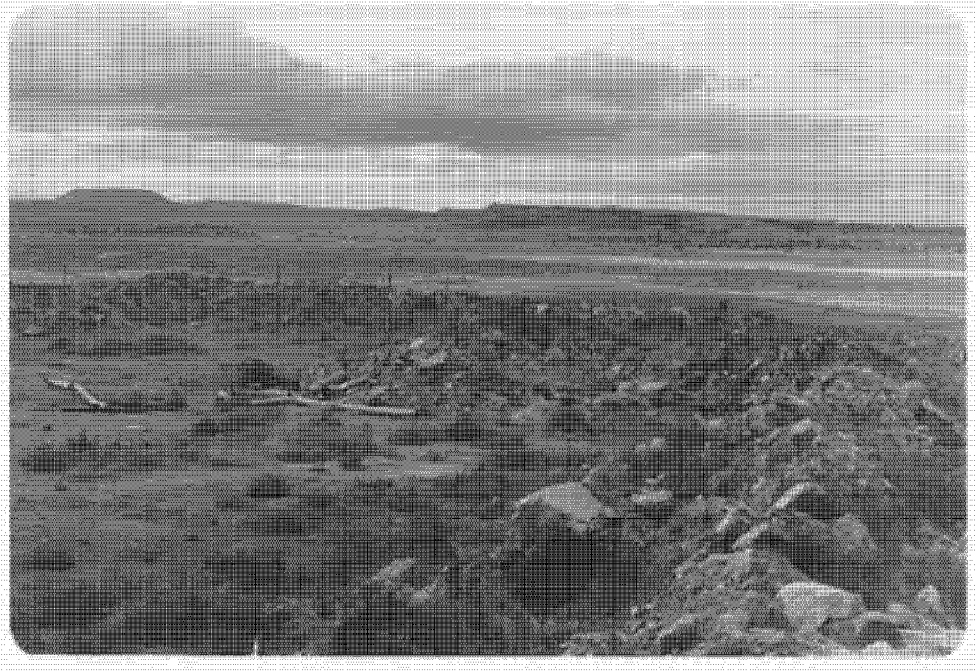


Photo (h) Looking NW from top of east edge of sec. 34 mine dump; adit is behind viewer. Note range pole at left center for scale.

V-64

Photo (i) Looking westward at sec. 34 mine dump; height of dump at far right is about 12'.

V-65

Date visited 1/29/80

Mine name(s) Tom 13 (Tom) County Valencia

Section NW¼ SW¼ 4 Twnsh. 11 N R. 9 W

Quadrangle sheet Grants 7½'

Mining district Mt. Taylor

Elevation 7,050'

Nearest city and/or dwellings Grants, 3½ mi. SW

The Tom 13 is located near the center of Sec. 4 on the west edge of East Grants Ridge. It is accessible by taking the U.S. Forest Service access road that leaves state highway no. 53 at a point .75 mi. north of the UN-HP uranium mill. Travel eastward on the access road for about 3.6 mi. to the Cibola National Forest boundary then turn right (south) and follow dirt trail toward the F-33 Mine. The Tom is approximately 1 mi. beyond the turnoff to the F-33.

The workings consist of several areas of rim stripping and/or bench cuts in the Todilto limestone. A semi-circular rim stripped area 110' in length is shown in photo (a). Scintillometer readings of 100 cps were only slightly higher than background which is about 70 cps in this area. No uranium mineralization is apparent. Several hundred feet to the northwest is a 100' long E-W trending bench cut that exposed a dark colored band 4"-5" thick in the Todilto limestone which produced a scintillometer response of 900 cps, (see photo b). The bench is about 35' in width and some material may have been taken out of this working, however, no uranium mineralization was apparent on the face or in the waste pile below the bench or road. Hilpert, 1969, stated that some ore was produced from a 2' to 3' thick deposit during 1954-55.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium section, in, Mineral and Water Resources of New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bull. 87.
(3) Field notes, 1/29/80.

V-66

Photo (a) Looking southward at a semi-circular rim stripped area of Todilto limestone; range pole is indicated at left (arrow) for scale.

Photo (b) Looking northwest at bench cut; high scintillometer reading of 900 cps was obtained at face immediately behind range pole.

V-67

Date visited 1/29/80

Mine name(s) Lone Pine 3 (Lone Pine) County Valencia

Section NE¼ 8 Twnsh. 11 N R. 9 W

Quadrangle sheet Grants 7½

Mining district Mt. Taylor

Elevation 7,250'

Nearest city and/or dwellings Grants, 3 mi. SW

The Lone Pine is located on the north side of Grants Ridge just 3 mi. northeast of the city of Grants. It is accessible by road from either the north or south. From the north take the U.S. Forest Service access road leading eastward from State Highway No. 53 at a point 5.3 mi. north of Milan (or .75 north of the UN-HP mill). Travel eastward for approximately 3.6 mi. to the Forest Service boundary and turn right (south) and follow dirt trails leading past the F-33 mine to Grants Ridge and the mine site. From the south take Lobo Canyon road leading northeastward from Grants for 2 mi., then turn left onto dirt road which climbs the east end of Grants Ridge and then turns westward along north side of the Ridge and leads to mine site. Mine is on Cibola National Forest land.

The mine consists of a timbered load out facility (photo a), two south trending adits, and a powder magazine. A road leads to both the lower, (load-out) level, and the upper (mine) level, although the upper one is no longer passable. The western adit portal is 7' high, 8' wide, with timbering in good condition; one of the doors at the entrance remains in place (see photo b). Inside the adit is clean but a considerable amount of slumping has partially obscurred the entrance. The adit goes in 30' and splits into a right and left fork (see photo c). Each fork continues for at least another 25'-30', but entire length was not explored. Scintillometer readings inside ranged up to 400 cps near the face. The host rock, Todilto limestone does not show as much intra-formational folding here as it does in other deposits. No uranium mineralization is apparent. Camp fires and graffiti indicate periodic visitors.

The second adit is located about 60' to the east. It is likewise well timbered, but caving and slumping at the entrance have nearly sealed it off (see photo d). A glimpse of the interior may be had by peering down through the overhead timbering; tracks indicated someone had recently entered this adit. Length is unknown, but there is no evidence that it connects with the western adit. Scintillometer readings at entrance were 150 cps at the entrance, or about 2 x background.

Approximately 40' east of this adit is a small powder magazine shown in photo (e). The entrance is caved to the extent that only a 2' hole remains and entry would be very difficult. It is perhaps 10'-12' long.

The extent of the mine dump is difficult to determine as it merely veils the material excavated during construction of the lower road. Scintillometer

turn

readings on the dump area were also about 150 cps. A small amount of ore was reportedly mined during 1954-55.

An account of the landslide masses that form an arcuate pattern around Grants Ridge is given in Kerr and Wilcox, 1963.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Kerr, Paul F., and Wilcox, J. T., 1963, Structure and Volcanism, Grants Ridge Area, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15.
(3) Field notes, 1/29/80.

Photo (a) Looking westward at Lone Pine 3 load out facility; note Entrada-Todilto contact at left. Adits are at level of uppermost timbering.

V-70

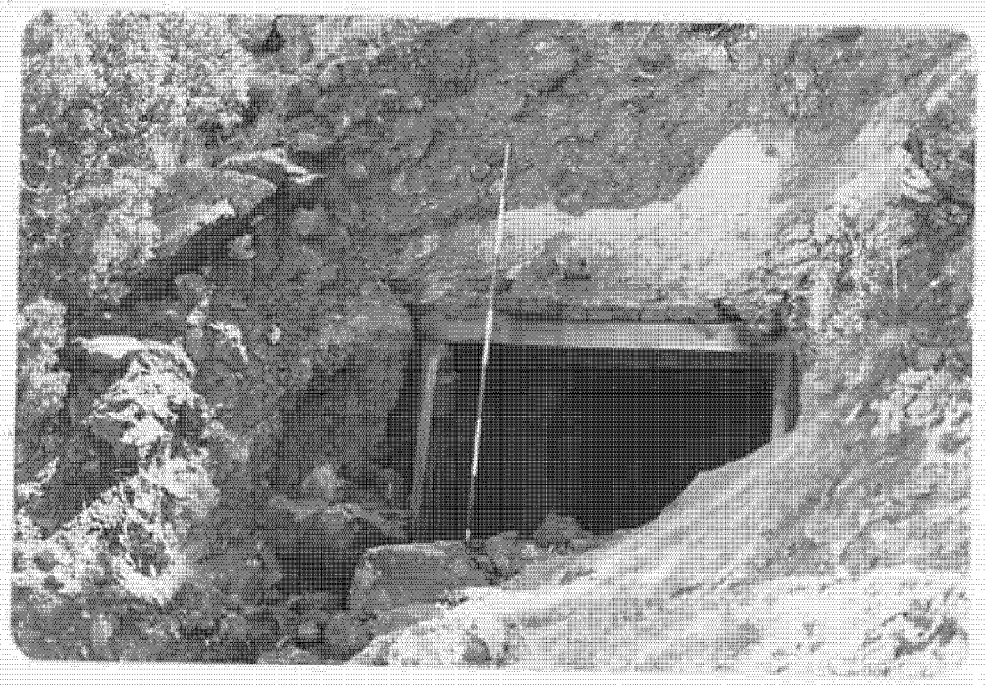


Photo (b) Portal of western adit.

Photo (c) View inside western adit; note timbering, grafitti, campfires, and split into left and right forks at rear.

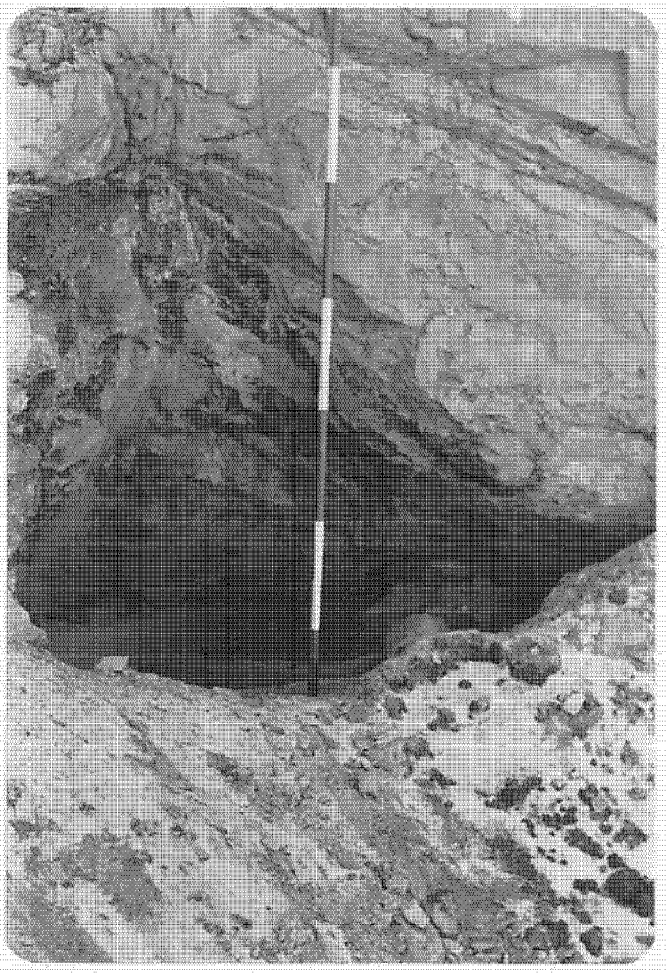


Photo (d) Caved entrance to eastern adit; view is at level of overhead timbering.

V-72

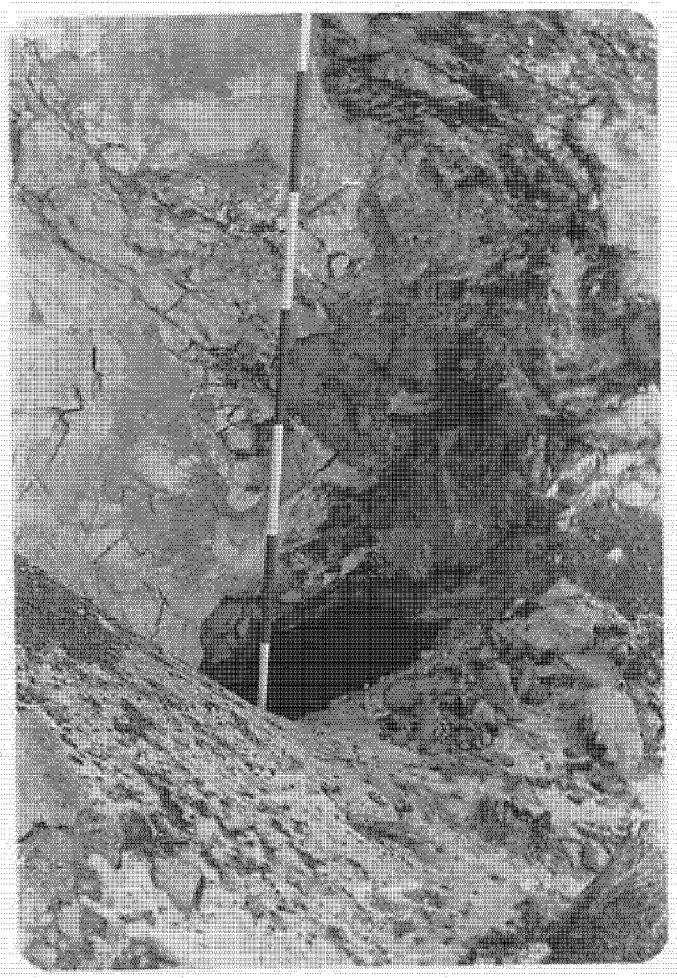


Photo (e) Caved entrance to Powder Magazine.

V-73

Date visited 3/21/80

Mine name(s) Cedar 1 (Yucca) (Falcon?) County Valencia

Section SE¼ 20 Twnsh. 11 N R. 9 W

Quadrangle sheet Grants 7½'

Mining district Grants

Elevation 6,580'

Nearest city and/or dwellings Grants is 1½ mi. to the southwest

The Cedar 1 deposit is located in the SE¼ of sec. 20, approximately 1 mile northeast of the trailer park at the east edge of Grants. The deposit was mined from an open pit which is located several hundred feet north, north east of an abandoned Todilto limestone aggregate pit which is presently being closed and regraded by Benny Griegos Trucking, of Grants.

The open pit measures 300' N-S, by 200' E-W, and is 25' deep at maximum (see photo a); pit entrances are located at the northwest and south ends. The deposit is associated with a series of east trending intraformational folds in Todilto limestone (see photos b & c). Scintillometer response in the areas of the exposed folds was 700 cps, or 10 x background. Yellow uranium vanadates are present, but sparingly.

The main waste pile lies immediately west of the main pit (photo a), however, mine waste piles lie to the north and east as well; some ore may have been stockpiled in the north and east areas as scintillometer responses were stronger there.

Linear prospecting trenches extend eastward toward the sec. 21 line (see photos d & e), but no prospecting or mine workings were recognized in sec. 21; an AEC mine listing noted the Falcon 1 and 2 claims in sec. 21. The name "Falcon" was mentioned as an alternate to the Cedar at the top of this page because the State Mine Inspector's Office has used "Falcon" for this mine on the Cedar claims; they however, also listed the location as being 4 miles southeast of Grants.

The name Yucca is an alternative to Cedar (Hilpert, 1969) and the State Mine Inspector's Office records noted that what they called the "Falcon" adjoined the Yucca Mine. They may have started out as two spearate pits and coalesced later. At present the pit appears as one working.

The mine was worked from 1952-1957 by Falcon Uranium and Oil Corporation; last registration was February, 1957.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) U.S. AEC, uranium mine records, GJO/AEC.
(4) Field notes 3/21/80.

V-74

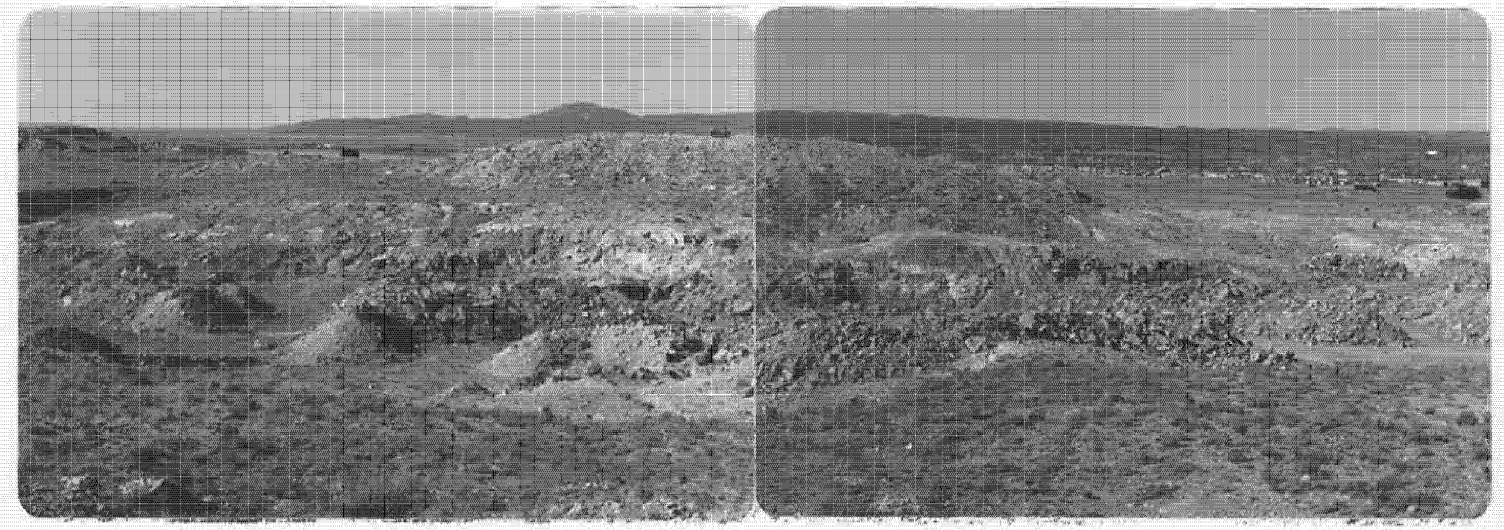


Photo (a) Looking generally southwest at open pit mine on Cedar 1 Claims; overburden pile at center behind the pit, Grants at right in background. At upper left is the remnants of an abandoned aggregate pit operation.

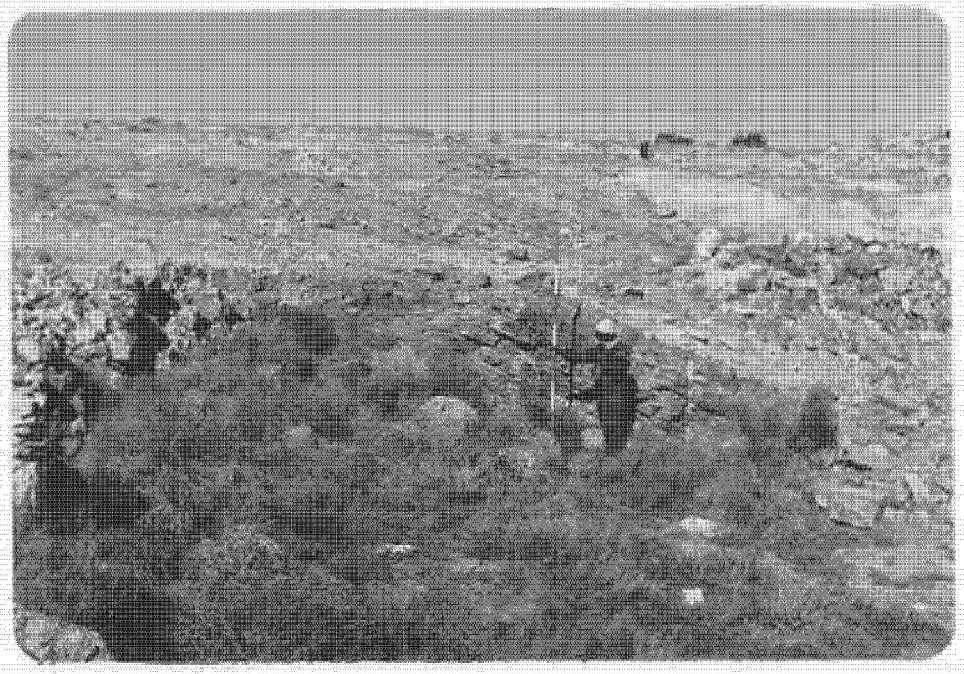


Photo (b) Looking westward into intraformational fold exposed in north end of open pit.

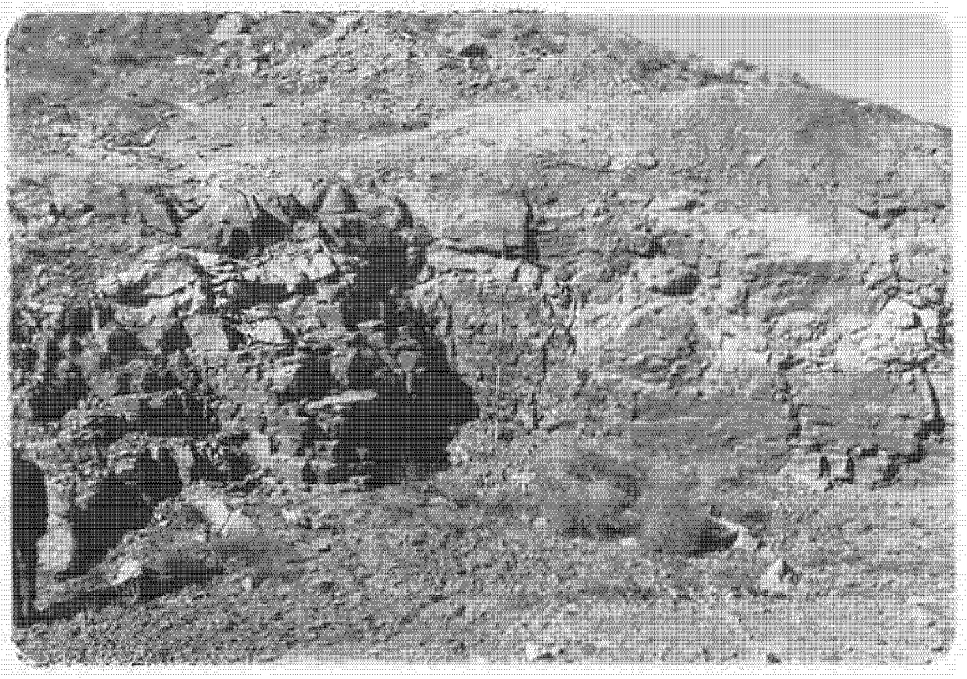


Photo (c) Looking westward into intraformational fold parallel to and 50' south of the fold in Photo (b). Scintillometer response was moderate, but visible mineralization scant.

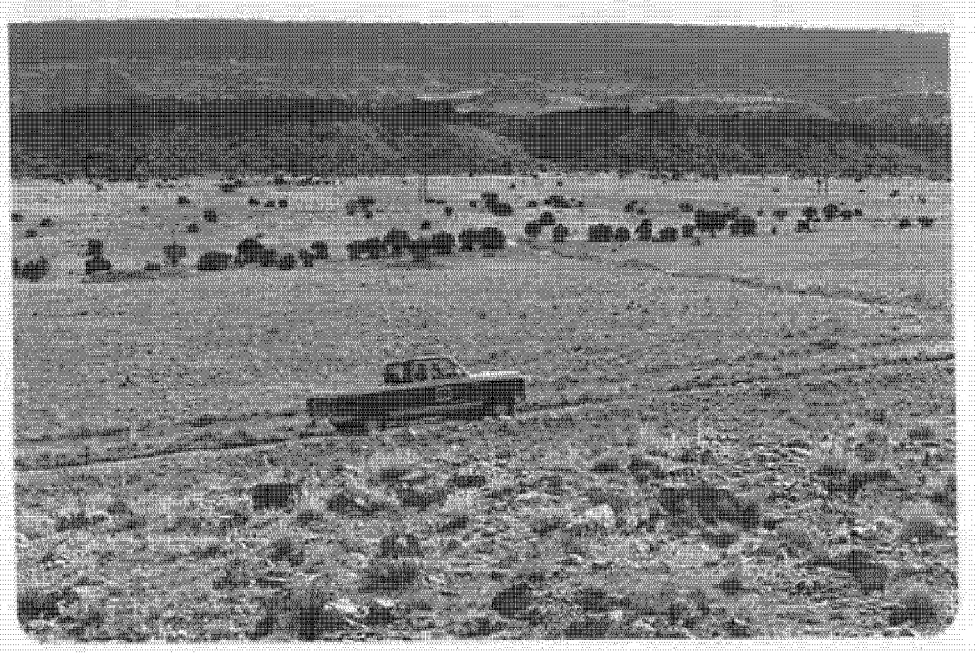


Photo (d) Linear prospecting trench extending eastward (upper right) from Cedar 1 open pit.

Photo (e) Looking westward at linear prospecting trench near southeast corner of sec. 20.

V-77

Date visited 5/7/80

Mine name(s) Chavez (Canoncito) County Valencia

Section SE¼ 22 Twnsh. 10 N R. 3 W

Quadrangle sheet Mesa Gigante 7½'

Mining district -

Elevation 6,080'

Nearest city and/or dwellings Canoncito Navajo School NE 3 mi.

The Chavez (Canoncito) is in the SE¼ sec. 22 near Canoncito School. To reach the site take the Canoncito exit east of the Rio Puerco on I-40 and proceed about 6½ miles north; then turn to left for 1½ miles to sec. 22. Last ½ mile must be made on foot as the access road no longer exists. Local passerby, Mr. Sam Pablo, assisted in locating the site during the present investigation.

Workings consist of an adit driven northeastward into the Recapture member sandstone of the Morrison Fm., and a small bench cut immediately west of the adit along a road descending to the site. Slumping has nearly obliterated the original bench cut and it appears as no more than a road cut at present. Scintillometer response at the cut was weak, about 2 x background. The mine is indicated on U.S.G.S., Map, GQ-212 by an adit symbol.

The adit, shown in photos (a) and (b) is about 6' high, 8' wide and forks into two drifts about 12' inside. Each drift continues for about another 25'. Some roof falls have occurred, and the entire length was not examined. Scintillometer readings at the portal ranged up to 1,200 cps; the ground out in front gave readings between 200-300 cps.

Hilpert (1960) stated that ore was mined from shallow open cut and adit in 1955. The State Mine Inspector's Office registered the mine in April, 1955 as the Canoncito. The registration indicated a uranium-vanadium deposit, being developed by Calumet-Hecla, Incorporated.

No production data available.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 57.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Moench, R. H., and Puffett, W. P., 1963, U.S.G.S., Map, GQ-212.
(4) Field notes, 5/7/80.

V-78

Photo (a) Looking eastward at 6' x 8' portal of adit at Chavez Mine. Maximum scintillometer readings were obtained at left side of portal where person is standing.

Photo (b) Looking eastward at same. Very little debris in way of timber, cable, or garbage remains at the site.

V-79

Date visited 5/7/80

Mine name(s) Woodrow (Woodrow Breccia Pipe) County Valencia

Section 36 and 1 Twnsh. 10 N and 11 N R. 5 W

Quadrangle sheet Moquino 7½'

Mining district Laguna

Elevation 6,000'

Nearest city and/or dwellings Jackpile Mine headquarters, 1½ miles west

The Woodrow Mine is located on the township 10 N/11 N line in sections 36 and 1. To reach the site go to the Anaconda Jackpile Mine headquarters and speak to Mr. Ernest Wylie, as the mine is on Anaconda property.

The deposit was discovered in 1951 and was mined in two stages by Anaconda during 1954 and 1956. During the first phase of the operation the interval down to 100' was mined through the main north shaft (see fig. 1); ore grade averaged 1.53% U_3O_8 and 0.05% V_2O_5. During the second phase, in 1956, the interval from 100' to 200' was mined with an average ore grade of 0.32% U_3O_8. The small shaft on south (fig. 1) caved in 1956 with the loss of 1 life and the mine was shut down. The other shaft was just backfilled in early 1980 (Ernest Wylie oral communication 5/7/80).

At present the site is level and clean except for a 16' x 18' metal shed (photos a & b). Scintillometer readings on the north side of this shed, which is the site of the north shaft ranged up to 800 cps at a natural outcrop.

The deposit is in a breccia pipe, 24' to 34' in diameter, with a fairly steep dip of 67°-83° (Wylie, 1963). Among the minerals positively identified were autunite, torbernite, meta-autunite, coffinite, uraninite, becquerelite, and zippeite, plus pyrite, chalcopyrite, and marcasite, (Wylie, 1963).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 58.
(2) Hilpert, L., and Moench, R. H., 1960, Uranium Deposits of the Southern San Juan Basin, New Mexico, Econ. Geol., v. 55, p. 429.
(3) Wylie, Ernest T., 1963, Geology of the Woodrow Breccia Pipe, in Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15; p. 177.
(4) N.M. State Mine Inspector's Office, inactive uranium mine file.
(5) Field notes, 5/7/80.

V-80

Photo (a) Looking westward at site of backfilled main shaft (northern shaft) at the Woodrow Mine.

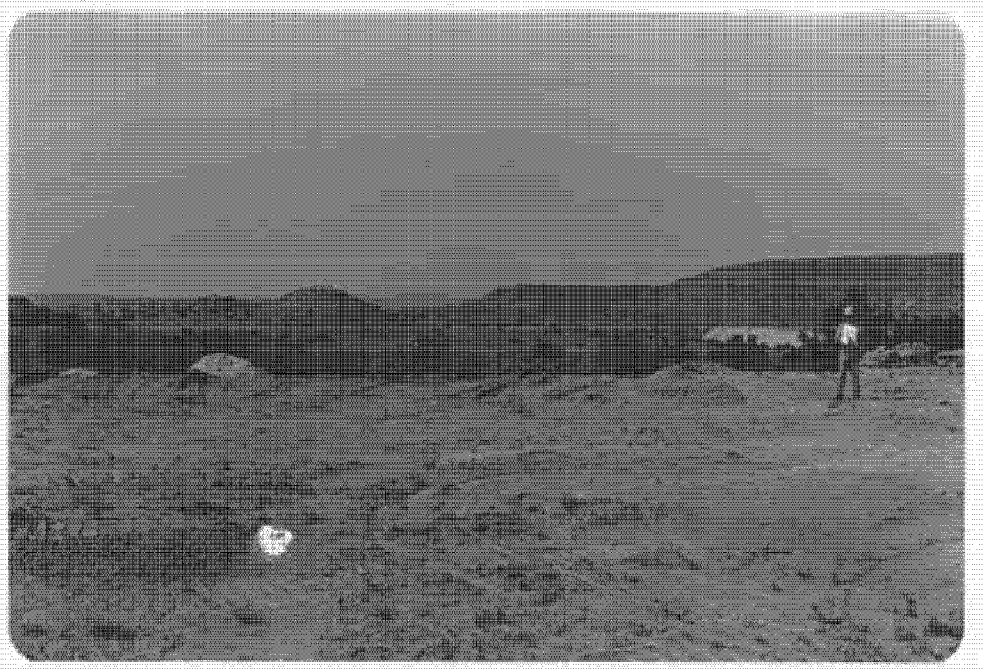


Photo (b) Looking southwestward at the site of backfilled shaft about 80' south of site shown in photo (a).

Date visited 1/30/80

Mine name(s) San Mateo County Valencia

Section NE¼ Sec. 30 Twnsh. 13 N R. 8 W

Quadrangle sheet San Mateo 7½'

Mining district Mt. Taylor

Elevation 7,020'

Nearest city and/or dwellings San Mateo, 4½ mi. east

The San Mateo Mine is located in the NE¼ of sec. 30 on the north flank of La Jara Mesa just inside the Cibola National Forest boundary. It is accessible via State Highway No. 53. From the junction of no. 53 and no. 509 (Ambrosia Lake junction) proceed eastward on no. 53 for 2 mi. to the Marcus Ranch. At this point take dirt road southward through gate (gate is kept locked by Mr. Sonny Marquez of San Mateo) and proceed southward and eastward 2 mi. to mine site.

The mine consists of a vertical shaft that penetrates alluvium, several hundred feet of Mancos Shale, The Dakota Sandstone, and the Brushy Basin member of the Morrison fm. The mine is developed at about the 1400' level in the Poison Canyon Sandstone Tongue in the lower Brushy Basin member. It marks the southeastern end of the Poison Canyon trend in which the deposits are generally elongate southeastward. United Nuclear Corporation sunk the shaft in the early 1960's and the mine produced through 1971. Total production is unknown.

A view of the mine site is shown in photo (a). A close-up of the shaft site, photo (b), shows a re-inforced concrete slab covering the shaft, caving around the slab, a danger sign, and a toppled over ore bin. Photos (c) & (d) are close-ups showing the extent of the caving around the west side of the concrete slab that has exposed a portion of the upper shaft. Dimensions of the shaft are not known; some timbering exposed at about 20' down. Scintillometer readings at the shaft edge ranged up to 700 cps.

Approximately 250' east of the shaft is a 30" diam. ventillation shaft covered with ¼" plate metal. A concrete pad for the blower motor remains; site is enclosed by a wire mesh fence that has been partially broken down (see photo e). Immediately north of the mine shaft is the concrete slab and foundation for the hoist and drum and a machine shop. The slab measures 38' x 115' (see photo f). 175' west of the shaft is another concrete slab, 40' x 110' with a considerable amount of general debris strewn about (see photo g).

The mine waste dump area extends northward from the mine shaft at a level 15'-20' lower than that at the mine. It measures approximately 450' long (E-W) and up to 300' in width. Photo (h) is a view southward from near the NE corner of the dump toward the mine shaft. Height of the dump at the toe ranges up to 30'. Maximum scintillometer reading on a traverse of the dump area was 3000 cps. Erosion and gullying on the east edge of the dump is illustrated in photo (i). Deep gullying to this extent is not, however, characteristic of the entire margin of the waste dump. The abrupt slope that separates the bench at mine level from the broad, flat surface of the

V-83

dump area is shown in photo (j). Part of the dump area shown may have been used to stockpile ore as local "hotspots" were found.

A view northward from the toe of the dump toward San Mateo Creek (photo k) shows the rectangular shaped earthen embankment where the company carried on some heap leaching experiments. The embankment measures about 100' x 200'; the 20' high cylindrical metal tank remaining near the site was perhaps used to store chemicals. Distance from the toe of the dump to San Mateo Creek is perhaps 1500', however, a tributary passes much closer than this at the eastern edge.

Recommendations:
(1) The shaft site should be fenced to keep man and beast away from the area of active caving. Present fence is in poor condition and is ineffective.
(2) United Nuclear Corporation officials should be contacted for details on how the upper shaft area was sealed before the surface slab was poured. A description of how the heap leaching site was sealed is also needed.

References:
(1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium section, in, Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources Bull. 87.
(3) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 1/30/80.

V-SN

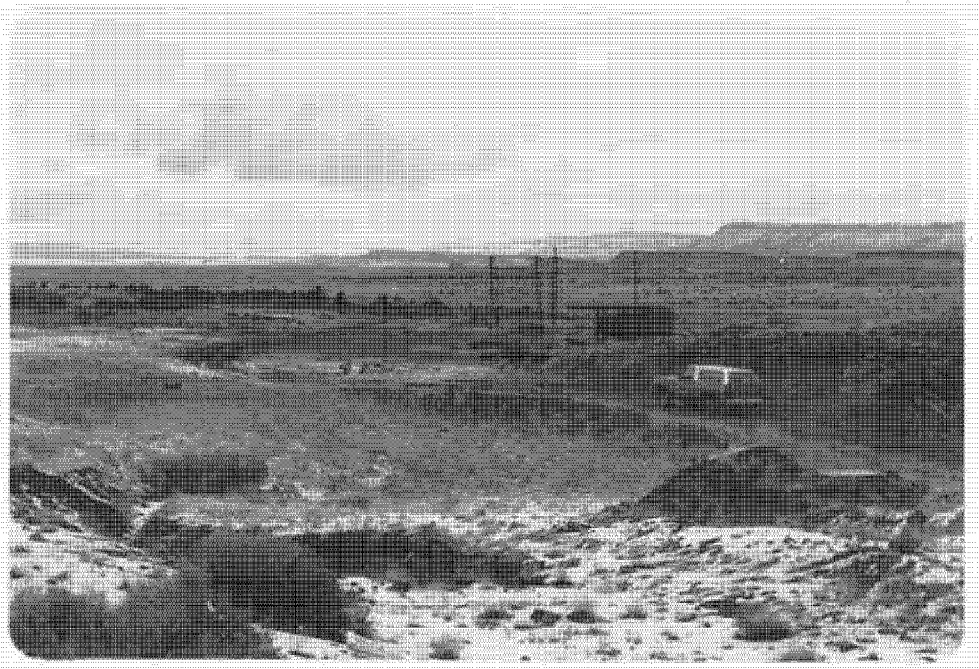


Photo (a) View northwestward of San Mateo Mine site.

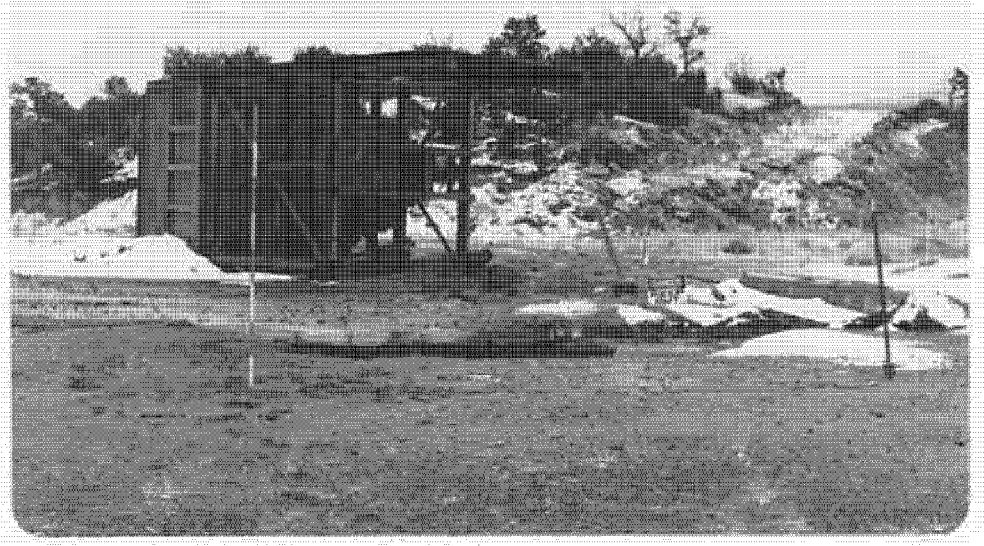


Photo (b) Looking northeast at shaft site showing caving which has begun around perimeter of concrete slab, and toppled ore bin; note range pole for scale.

V-85

Photo (c) Close-up of shaft site showing extent of caving; concrete slab is 8" thick at far left.

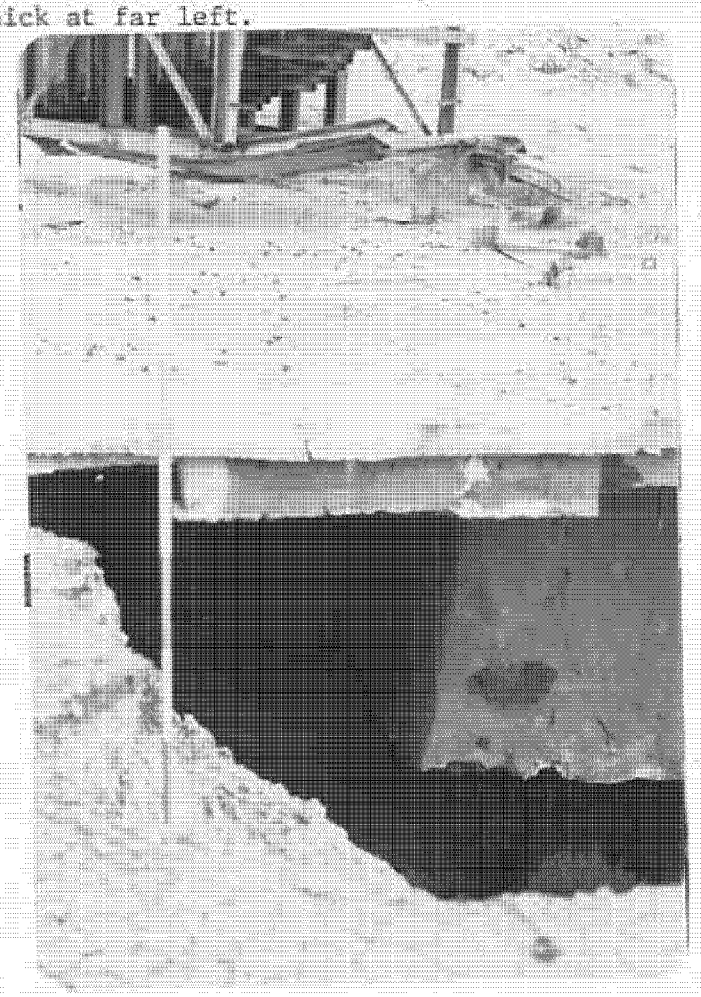


Photo (d) Close up of concrete slab over mine shaft showing void beneath; note range pole in foreground and again the ore bin.

V-86

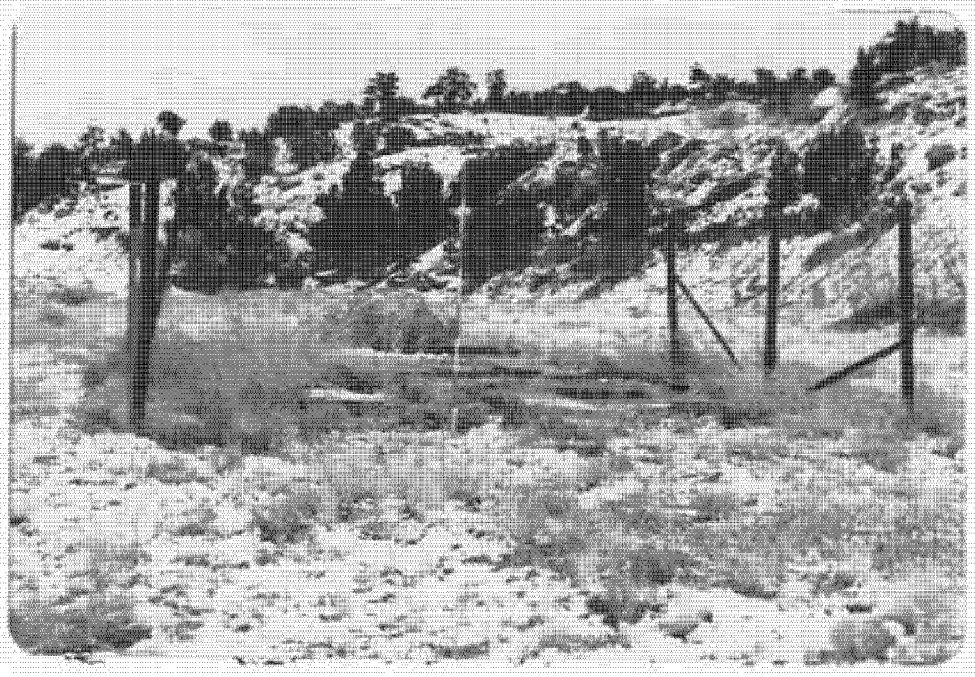


Photo (e) Looking eastward at 30" diam. ventillation shaft and foundation for blower motor. Wire mesh fence surrounding site has been partially destroyed.

Photo (f) Looking northeastward at concrete slab and hoist and drum foundation. Slab measures 38' x 115'; note range pole for scale.

V-87

Photo (g) Looking westward at concrete slab and general debris west of shaft site. Slab measures 40' x 110' and was probably used as office space; note range pole just right of center.

Photo (h) Looking southward from near northeast corner of mine dump area toward the mine shaft on bench at higher level.

V-56

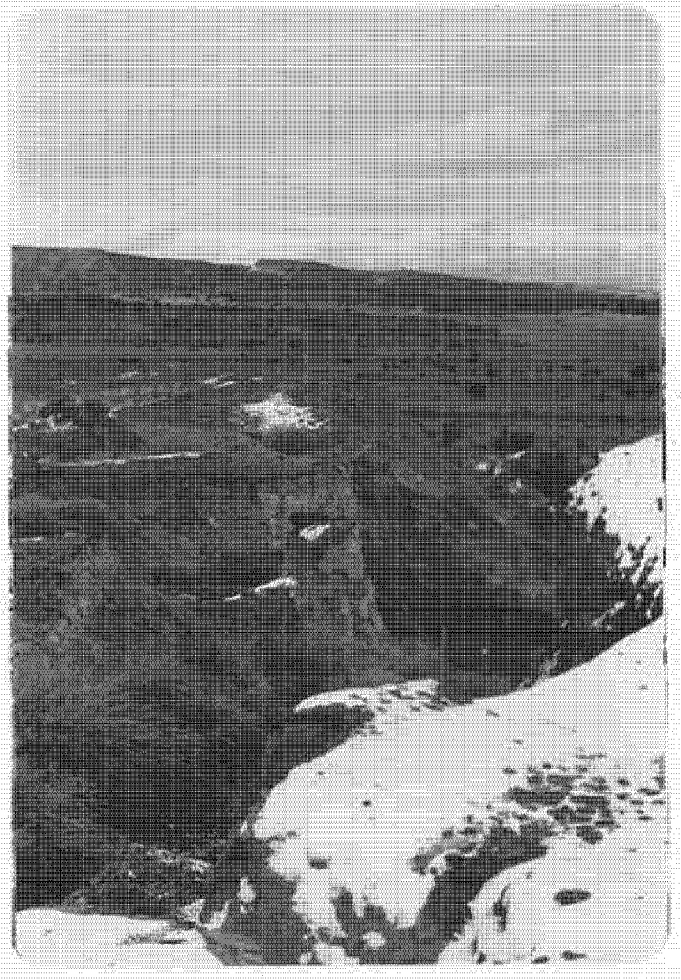


Photo (i) View northward at east edge of dump showing gullying; note range pole for scale and tributary in background visible through the gully notch.

V-69

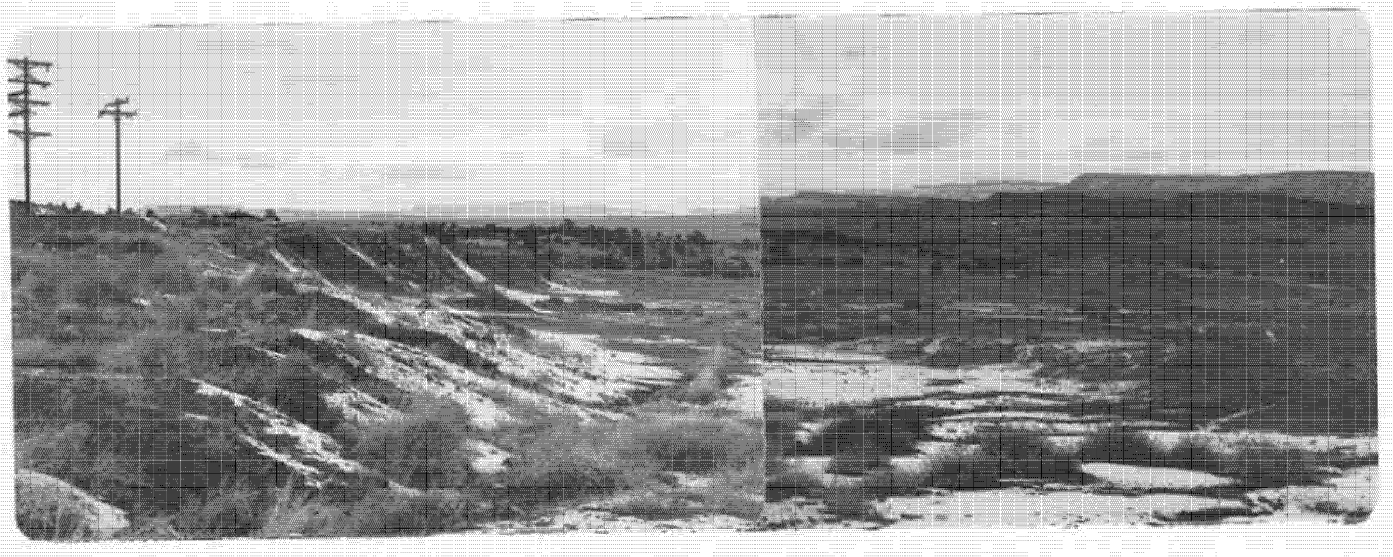


Photo (j) View northwestward from eastern edge of dump showing mine level at far left, upper surface of dump area at center foreground and right, and level of San Mateo Creek at right in the middle distance.

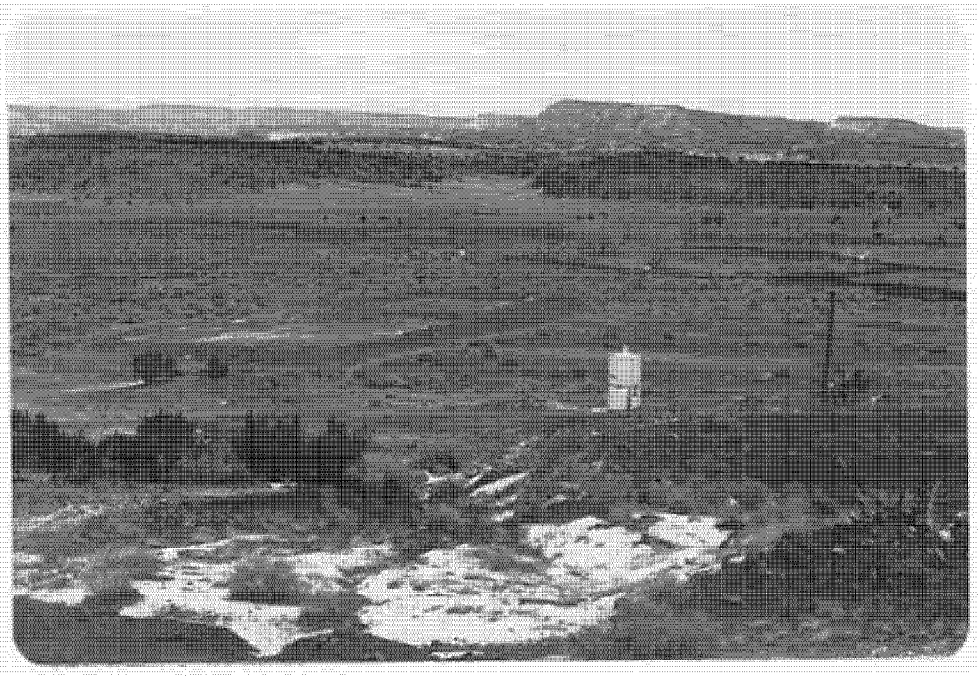


Photo (k) View northward from toe of dump showing rectangular earthen embankment used for heap leaching experiments; note metal tank perhaps used for chemical storage. San Mateo Creek in middle distance flows from right to left. A tributary entering from south (arrow) passes within several hundred feet of eastern edge of dump.

Date visited 5/6/80

Mine name(s) Crackpot Mine County Valencia

Section NW¼, NW¼ 8 Twnsh. 8 N R. 5 W

Quadrangle sheet South Butte 7½'

Mining district South Laguna

Elevation 6,300'

Nearest city and/or dwellings Mesita, 8 miles northeast

The Crackpot is located in the NW¼ sec. 8 on Sharp Point. To reach the workings proceed southward and southwestward on dirt road about 8 miles from the Mesita exit on I-40.

The mine consists of a 120' long open cut, elongate NW-SE, 30' wide at the northwest at entrance ramp, 80' wide at SE where several short adits or gopher holes are driven, and 22' deep (see photo a). The longest of the adits is the 40' one driven in along the crest of an anticline (photo b). Water stands seasonally in this adit. The other underground workings go in no more than 6'-8'. The waste dump lies 250' to the south and is 40' x 90', about 4' high (see photo c).

The deposit is in a NW trending domelike fold in Todilto limestone; closure is about 3'-5' with lesser folds radiating out from dome (Hilpert, 1969). Mineralization is in lower 15' in platy and crinkley zones, and is concentrated near center of dome. Some secondary uranium mineralization is visible on muck piles and faces; much calcite in fracture zones especially on north side of pit. Scintillometer readings in pit ranged up to 2,500 cps; on mine dump up to 1,000 cps.

Hilpert, (1969) stated that ore was mined in 1955. The workings represent one of the Anaconda Companies earliest uranium mining ventures in the area. The geology of the ore deposit plus some information on ore grade is given in Moench (1963, p. 163).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 56.
(2) Moench, R. H., 1963, Geologic Limitations on the Age of Uranium Deposits in the Laguna District, in Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15; p. 163.
(3) Field notes, 5/6/80.

turn

V-9/2

Addendum: Water quality data on sample taken from pond standing in long adit of photo (b).

Conductivity	272 μ mho
pH	8
SO_4	<25 ppm
U_3O_8	0.76 ppm

V-93

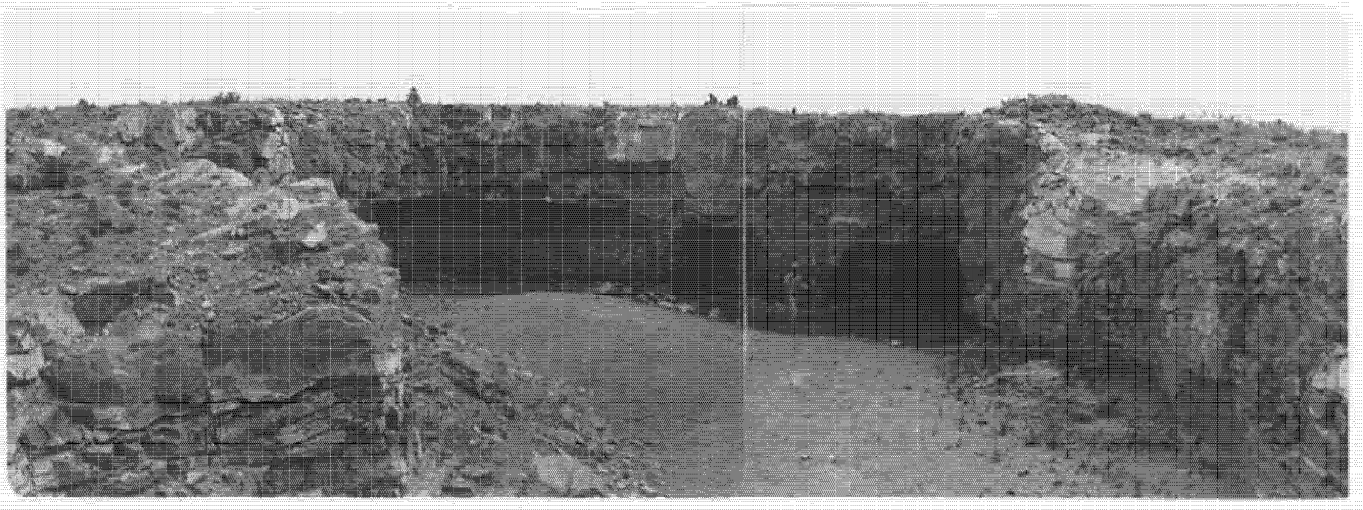


Photo (a) Panorama looking southeastward into 22' deep open pit at Crackpot Mine; several small gopher holes or stub adits are driven into highwall, the one at right shown in greater detail in photo (b).

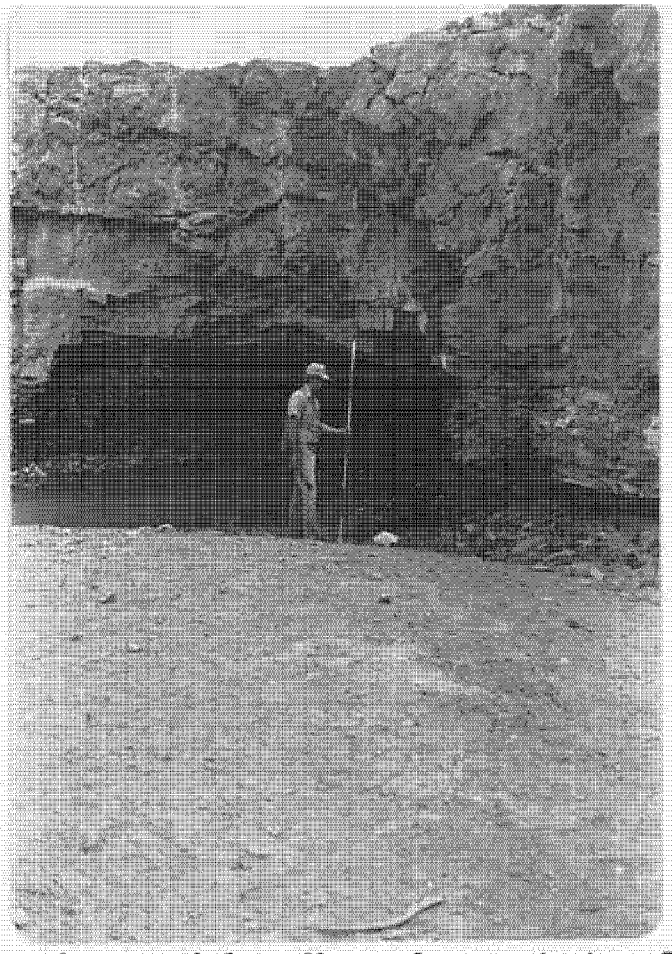


Photo (b) Looking southeastward from floor of open pit into 7' high, 10'-12', adit shown at right in photo (a).

Photo (c) Waste dump, 250' south of open pit, looking south. Note range pole at left for scale.

V-95

Date visited 5/6/80

Mine name(s) Paisano Prospect County Valencia

Section SE¼, NW¼ 16 Twnsh. 8 N R. 6 W

Quadrangle sheet South Butte 7½'

Mining district South Laguna

Elevation 6,160'

Nearest city and/or dwellings Marmon Ranch, 6 miles S-SE; Mesita, 14 miles NE.

The prospect is located just north of Alamo Spring in the NW¼ sec. 16. The site may be reached by leaving I-40 at the Mesita exit and proceeding southward and westward for about 14 miles toward Alamo Spring.

No recognizable workings exist at the site. One 4" x 4" claim post was found about 600' northeast of Alamo Spring. One small area on a Todilto limestone outcrop nearby produced a scintillometer reading of 90 cps, or about 2 x background. No uranium minerals visible.

The small open pit referred to by Hilpert (1969) was not identified.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 56.
(2) Field notes, 5/6/80.